# PROCEEDINGS

OF THE

# MADRAS GOVERNMENT

IN THE

# PUBLIC WORKS DEPARTMENT,

FOR THE

MONTH OF NOVEMBER

1861.

PRINTED BY AUTHORITY.

MADRAS:

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1861.

# PUBLIC WORKS DEPARTMENT.

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*For the Month of November* 1861.



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| 199 & 200 | Estimates for the maintenance of roads in certain Cantonments, sanctioned. | 14th Nov.<br>No. 2,117. | ............ | 14th April 1860, Nos. 67, 68.<br>27th April 1860, Nos. 109, 110.<br>6th Sept. 1860, Nos. 59, 60.<br>15th Sept. 1860, Nos. 158, 159.<br>Mily., 8th Nov. 1860, Nos. 172, 173.<br>P. W, 31st Jan. 1861, Nos. 424—438.<br>5th March 1861, Nos. 53, 54.<br>8th April 1861, Nos. 103, 104. | 2360 |
| 201 & 202 | Letter from Pier Committee, forwarding draft of the provisions they propose for embodiment in the Madras Pier Act, with orders thereon. | 14th Nov.<br>No. 2,118. | ............ | 11th Nov. 1859, Nos. 6, 7. | 2361 |
| 203 & 204 | Telegram from the Collector of Nellore, requesting orders with respect to his objections to Mr. Sage's removal, communicated to Chief Engineer. | 14th Nov.<br>No. 2,119. | ............ | 4th Nov. 1861, Nos. 21, 22.<br>11th Nov. 1861, Nos. 157, 158. | 2361 & 2362 |
| 205 & 206 | List of bills received from the Dist. Engineer Presidency for works executed on emergency, sanctioned. | 15th Nov.<br>No. 2,120. | .......... | 28th March 1861, Nos. 480, 481.<br>13th May 1861, Nos. 83, 84. | 2362 & 2363 |
| 207 & 208 | Indent for Pumps and Europe rope for the use of the Steam Dredge to be employed in the Negapatam Harbour, sanctioned. | 15th Nov.<br>No. 2,121. | ........... | 30th Oct. 1860, Nos 399, 400. | 2363 & 2364 |
| 209 & 210 | List of bill of the Dist. Engr. Salem, for work executed on emergency, sanctioned. | 15th Nov.<br>No. 2,122. | ........... | 10th Sept. 1860, Nos. 87, 88.<br>2nd Oct. 1860, Nos. 33, 34. | 2365 |
| 211 & 212 | Daniel Pillai permitted to be employed as Accountant in No. 5 Range of the Tanjore Dist. for a period of 12 months. | 15th Nov.<br>No. 2,123. | ........... | 19th Augt. 1861, Nos. 302, 303. | 2365 & 2366 |
| 213 & 214 | Certain arrangements proposed by Chief Engr., consequent on the application of Major Rawlins for 2 months' cumulative privilege leave, sanctioned. | 15th Nov.<br>No. 2,124. | ............ | None. | 2366 |
| 215 & 216 | List of bill of the Dist. Engr., North Canara which exceeds its estimate by more than five per cent., sanctioned. | 15th Nov.<br>No. 2,125. | .......... | 8th Oct. 1858, Nos. 58, 59. | 2367 |
| 217 & 218 | Endorsement of Sudder Court on the letter from Civil Judge of Guntoor, regarding a certain building in Chabrole, communicated to Chief Engr. | 15th Nov.<br>No. 2,126. | ........... | 15th Oct, 1861, Nos. 182, 183. | 2368 |
| 219 & 220 | Bill for Camp Stools purchased by the District Engineer North Canara, sanctioned. | 15th Nov.<br>No. 2,127. | ........... | 30th July 18 Nos. 16, 17,59,<br>8th Oct. 1861, Nos. 86, 87. | 2368 & 2369 |

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| 221 & 222 | List of bills of the District Engineer Bellary for works executed on emergency, sanctioned. | 1861. 16th Nov. No. 2,128. | ........... | None. | 2369 |
| 223 & 224 | Estimate for re-building the revetment of Well No. 2 in the Bolur Maidan in the Cantonment of Mangalore, sanctioned. | 16th Nov. No. 2,129. | ........... | 30th Aug. 1861, Nos. 443, 444. | 2370 & 2371 |
| 225 & 226 | Chief Engr.'s explanation with respect to the Salt pan roads in the Ganjam District, accepted. | 16th Nov. No. 2,130. | ........... | P. W., 19th Nov. 1857, Nos. 41, 42. Rev. 7th July 1859, No. 57. Rev. 13th Aug. 1859, Nos. 7, 8. 9th Sept. 1859, Nos. 101, 102. 22nd Nov. 1860, Nos. 363, 364. 12th Sept. 1861, Nos. 92, 93. | 2371 & 2372 |
| 227 & 228 | Letter from the Consulting Engineer for Irrigation and Canal Company forwarding Plans and Estimates for the 2nd and 3rd portions of the main canal, with orders thereon. | 16th Nov. No. 2,131. | ........... | 31st May 1861, Nos. 266, 267. 8th Oct. 1861, Nos. 102, 103. 11th Oct. 1861, Nos. 162, 163. | 2372 to 2375 |
| 229 & 230 | Letter from the Resident at Hyderabad, respecting the transfer of land required in the Hyderabad Territory for the construction of railroads, forwarded to Captain Haig. | 16th Nov. No. 2,132. | ........... | 30th Oct. 1861, Nos. 397—401. | 2375 & 2376 |
| 231 & 232 | Circular from the Govt. of India, containing certain instructions for the preparation of Budget for 1862-63, communicated to Chief Engineer. | 16th Nov. No. 2,133. | ........... | Rev. 11th Oct. 1861, Nos. 150, 151. | 2376 & 2377 |
| 233 & 234 | Reasons given by the Chief Engr. for removing Mr. Sage from Nellore, considered satisfactory. | 18th Nov. No. 2,134. | ........... | 4th Nov. 1861, Nos. 21, 22. 11th Nov. 1861, Nos. 157, 158. | 2377 & 2378 |
| 235 & 236 | Procs. Pub. Dept., regarding a building for a Dispensary and Civil Hospital at Ootacamund, communicated to Chief Engr. | 18th Nov. No. 2,135. | ........... | 15th June 1859, Nos. 60, 61. | 2378 |
| 237 & 238 | Procs. Marine Dept., directing Commander Hopkins to proceed to Cocanada, communicated to Chief Engr. | 19th Nov. No. 2,136. | ........... | Marine. 7th Nov. 1861, Order No. 354. P. W., 13th Nov. 1861, Nos. 185, 186. | Ibid |
| 239 & 240 | Letter from the Govt. of India applying for the services of Lieutenant D. H. Trail of the Madras Engrs., forwarded to Chief Engineer for report. | 19th Nov. No. 2,137. | ........... | None. | 2379 |
| 241 & 242 | Letter from Chief Engr., enclosing a receipt of Rs. 20 for Medl. attendance on Lieut. Smalley, forwarded to Civil Paymaster. | 19th Nov. No. 2,138. | ........... | None. | 2379 & 2380 |

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| | | 1861. | | | |
| 243 & 244 | Chief Engr., directed to communicate with the Acct. Genl. respecting the security Bond deposited by Colonel Henderson. | 19th Nov. No. 2,139. | ......... | 13th Nov. 1861, Nos. 187, 188. | 2380 |
| 245 & 246 | Letter from Civil Paymaster stating that Mr. Clements' claim for extra allowance can be admitted, communicated to Chief Engr. | 19th Nov. No. 2,140. | ......... | 21st May 1859, Nos. 59, 60.<br>8th July 1859, Nos. 72, 73.<br>22nd Aug. 1861, Nos. 338, 339.<br>9th Oct. 1861, Nos. 116, 117. | Ibid |
| 247 & 248 | Estimate for the repair of certain works injured by the recent floods in the Godavery Dist., sanctioned. | 19th Nov. No. 2,141. | ......... | 26th June 1861, Nos. 325, 326.<br>31st Aug. 1861, Nos. 457, 458. | 2381 to 2383 |
| 249 & 250 | Procs. Mily. Dept., annexing letter from the Adjt. Genl. of the Army permitting Chief Engr. to dispose of applications for leave in India in the case of Warrant Officers in the P. W. D., communicated to him. | 19th Nov. No. 2,142. | ......... | 17th April 1861, Nos. 253, 254.<br>12th Aug. 1861, Nos. 212, 213.<br>6th Nov. 1861, Nos. 60, 61. | 2383 |
| 251 & 252 | Chief Engr.'s letter reporting the progress made with the temporary communications at the three barriers Upper Godavery during the month of September 1861, with orders thereon. | 19th Nov. No. 2,143. | ......... | 30th Oct. 1861, Nos. 397, 398.<br>31st Oct. 1861, Nos. 402, 403. | 2384 to 2387 |
| 253 | Letter to the Govt. of India on the foregoing subject. | 19th Nov. No. 2,144. | ......... | 8th Nov. 1861, Nos. 96—105. | 2387 |
| 254 & 255 | Chief Engr.'s letter submitting a memorandum of works proposed to be carried out from the one and a half lacs offered for works relating to the supply of cotton, with orders thereon. | 19th Nov. No. 2,145. | ......... | P. W., 21st July 1859, Nos. 52—54.<br>10th July 1861, Nos. 132, 133.<br>Rev., 26th Aug. 1861, Nos. 352, 353.<br>P. W., 23rd Sept. 1861, Nos. 237, 238.<br>Rev. 11th Oct. 1861, Nos. 150, 151.<br>P. W., 17th Oct. 1861, Nos. 204, 205.<br>29th Oct. 1861, Nos. 379, 380.<br>23rd Nov. 1861, No. 295, 296. | 2388 to 2390 |
| 256 | Letter to the Govt. of India on the foregoing subject. | 19th Nov. No. 2,146. | ......... | Ditto. | 2391 |
| 257 & 258 | Bill of the Dist. Engr. Nellore for certain repairs to the Office and Carpenters' shed at the Engr. store yard at that station, sanctioned. | 20th Nov. No. 2,147. | ......... | 8th May 1860, Nos. 116, 117. | 2393 to 2395 |

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| | | 1861. | | | |
| 259 & 260 | Chief Engr.'s letter, stating that a sum can be transferred from the funds of the Dist. Engr. Presidency, to the credit of the special Executive Engr. Wellington, for the restoration of Lieut. Fraser's ground, recorded. | 20th Nov. No. 2,148. | ........ | 6th March 1861, Nos. 106, 107. 1st July 1861, Nos. 25, 26. | 2395 & 2396 |
| 261 & 262 | Promising to sanction the actual charges incurred in making the Pier available immediately. | 20th Nov. No. 2,149. | ........ | 10th Oct. 1861, Nos. 132, 133. | 2396 |
| 263 & 264 | Letter from the Consulting Engr. for I. and C. Company, forwarding an estimate for an Office, Store Room, and Artificers' shed at Bowanassy, recorded. | 20th Nov. No. 2,150. | ........ | 9th Nov. 1861, Nos. 116, 117. | 2396 & 2397 |
| 265 & 266 | Procs. Mily. Dept., regarding the Ramandrúg tank, communicated to Chief Engineer. | 20th Nov. No. 2,151. | ........ | 11th Oct. 1861, Nos. 140—143. | 2397 |
| 267 & 268 | Chief Engr.'s letter, regarding the new Jail at Salem, communicated to Judicial Department. | 21st Nov. No. 2,152. | ........ | 1st March 1861, Nos. 7, 8. | 2397 to 2399 |
| 269 & 270 | A certain sum for the improvement of the new Track between Yerkad and Ahtur in the District of Salem, sanctioned. | 21st Nov. No. 2,153. | ........ | 10th Sept. 1861, Nos. 58, 59. 24th Oct. 1861, Nos. 289, 290. 25th Oct. 1861, No. 309, 310. 30th Oct. 1861, Nos. 392, 393. | 2399 & 2400 |
| 271 & 272 | Promotion of Corporal Banks to the rank of Assistant Overseer, sanctioned. | 21st Nov. No. 2,154. | ........ | 26th Oct. 1861, Nos. 328, 329. | 2401 & 2402 |
| 273 & 274 | Chief Engr. required to report if Captain Winscom's services can be spared. | 21st Nov. No. 2,155. | ........ | None. | 2402 |
| 275 & 276 | Acct. Genl. requested to place one lac immediately at Captain Haig's disposal. | 21st Nov. No. 2,156. | ........ | 31st Oct. 1861, Nos. 402, 403. | 2402 & 2403 |
| 277 & 278 | Bill of the Dist. Engr. of Madúra, on account of deductions made from the salary of Mr. Covenanted Overseer Dudgeon, sanctioned. | 22nd Nov. No. 2,157. | ........ | 20th Sept. 1861, Nos. 200, 201. | 2403 |
| 279 & 280 | Bd's. Procs., submitting a report from the Dy. Collr. Ragunada, Ráu, regarding the lands required for the I. and C. Compy., in the first section from Sunkasala to Kurnool, with orders thereon. | 22nd Nov. No. 2,158. | ........ | Rev. 2nd June 1860, No. 17. 21st July 1860, No. 357. | 2403 to 2409 |
| 281 & 282 | Chief Engr.'s proposal to issue a Circular applying the rules of security to Sub-Overseers temporarily employed, approved. | 22nd Nov. No. 2,159. | ........ | 19th Sept. 1860, Nos. 190, 191. | 2411 |
| 283 & 284 | List of bill of the Dist. Engr. Madras, for works executed on emergency, sanctioned. | 22nd Nov. No. 2,160. | ........ | None. | Ibid |
| 285 & 286 | An estimate for the construction of two bridges in the Dist. of Salem, sanctioned. | 22nd Nov. No. 2,161. | ........ | 12th Dec. 1860, Nos. 179, 180. 28th Oct. 1861, Nos. 356, 357. | 2412 |
| 287 | Statement of expenditure upon Public Works up to the 31st August 1861, with orders thereon. | 22nd Nov. No. 2,162. | ........ | None. | Ibid |

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| | | 1861. | | | |
| 288 &289 | Continuance of Veranuttum Lock and Rágavian and Mullataur Channel establishments, sanctioned. | 23rd Nov. No. 2,163. | .......... | 13th Oct. 1858, Nos. 1, 2. | 2413 |
| 290 &291 | Arrangements contemplated by Chief Engineer, regarding the opening out of a line of Ghát from Goodaloor at the head of the Cumbum Valley to the summit of the ascent in the Madura District, promised to be sanctioned. | 23rd Nov. No. 2,164. | ......... | 11th Nov. 1861, Nos. 128, 129. | 2414 |
| 292 &293 | List of bills of the Executive Engr. of Bangalore, for works executed on emergency, sanctioned. | 23rd Nov. No. 2,165. | .......... | None. | 2415 |
| 294 | Authority granted for proceeding with the Anicut and Head works across the Tumbuddra river at Sunkasala. | 23rd Nov. No. 2,166. | .......... | 11th Oct. 1861, Nos. 162, 163. 7th Nov. 1861, Nos. 76, 77. | 2416 |
| 295 &296 | Reduction in the expenditure on the road from Yerraguntla to the Railway Station at Coodoor, approved. | 23rd Nov. No. 2,167. | .......... | 23rd Nov. 1857, Nos. 117, 118. | 2416 to 2418 |
| 297 &298 | List of bills of the Dist. Engr. Bellary, which exceed their respective estimates by more than 5 per cent., sanctioned. | 23rd Nov. No. 2,168. | .......... | 6th Dec. 1858, Nos. 98, 99. 19th July 1859, Nos. 116, 117. | 2419 & 2420 |
| 299 &300 | Employment of Mr. F. S. Aranha as Accountant in the Sircy Range for one year, sanctioned. | 23rd Nov. No. 2,169. | .......... | None. | 2420 & 2421 |
| 301 &302 | Temporary appointment of Sub-Overseer Soobaroy Pillai in Madura Dist., sanctioned. | 23rd Nov. No. 2,170. | .......... | 19th Oct. 1861, Nos. 229, 230. | 2421 & 2422 |
| 303 &304 | Certain sum granted for the continuation of the track from Vizagapatam to Harris' Valley to Jeypoor. | 23rd Nov. No. 2,171. | .......... | P. W., 4th May 1860, Nos. 59, 60. 20th Oct. 1860, Nos. 277, 278. Rev., 26th Aug. 1861, Nos. 352, 353. P. W., 29th Oct. 1861, Nos. 379, 380. | 2423 & 2424 |
| 305 | Letter to the Commissioner of Nagpore, requesting that steps may be taken for extending the Jeypoor track to the capital of Bustar. | 23rd Nov. No. 2,172. | .......... | Do. | 2424 |
| 306 &307 | Letter from the Agent Madras I. and C. Company, stating that the Sub-Treasurer has refused to pay his Drafts for 10,000 Rs., transferred to the Accountant General. | 23rd Nov. No. 2,173. | .......... | 11th Nov. 1861, Nos. 152, 153. | 2425 |
| 308 & 309 | Bill for extra work done in the erection of Perambore lines, sanctioned. | 23rd Nov. No. 2,174. | .......... | Mily., 8th Aug. 1854, Nos. 93, 94. P. W. 21st Dec. 1857, Nos. 59, 60. | 2425 & 2426 |

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| | | 1861. | | | |
| 309 A & 309 B | Application resolved to be made to the Bombay Govt. for the services of Captain Fraser, Commanding H. M.'s Steamer "Falkland" and of his crew, for fixing Buoys at Tuddry and putting down the Moorings in Beitkál Bay. | 25th Nov. No. 2,174 A. | ........... | 17th Sept. 1861, Nos. 161, 162. | 2426 & 2427 |
| 310 & 311 | Appointment of an Apothecary at Bowanassy, sanctioned. | 25th Nov. No. 2,175. | ......... | 3rd April 1861, Nos. 9—11. 29th Aug. 1861, Nos. 427, 428. | 2427 |
| 312 & 313 | Vencatarama Iyer and Doraswámi Iyengar permitted to continue as Sub-Overseers for 12 months more, in Tanjore District. | 25th Nov. No. 2,176. | ........... | None. | 2428 |
| 314 & 315 | Chief Engr.'s Endorsement, recommending the continued employment of the C. Company of Sappers, on the Galikondah Ghát, communicated to Military Department. | 25th Nov. No. 2,177. | ........... | 30th Jan. 1860, Nos. 157, 158. 22nd Oct. 1861, Nos. 244, 245. 19th Nov. 1861, Nos. 254, 255. | 2429 & 2430 |
| 316 & 317 | Entertainment of Serjeant Newton as an Asst. Overseer in Cuddapah Dist., sanctioned. | 26th Nov. No. 2,178. | .......... | 13th Sept. 1861, Nos. 124, 125. | 2430 & 2431 |
| 318 & 319 | Chief Engr. directed to arrange for the expenditure of 5,000 Rs. on the improvement of the road between the foot of the Kárkoor Ghát, and Mambat. | 26th Nov. No. 2,179. | ........... | 30th Sept. 1861, Nos. 305, 306. | 2431 & 2432 |
| 320 & 321 | Chief Engr. required to modify the rules so as to enable him to deal with the securities of his Subordinates on his own responsibility without reference to Government. | 26th Nov. No. 2,180. | .......... | 9th Jan. 1858, Nos. 1, 2. 10th July 1860, Nos. 181, 182. 22nd Oct. 1861, Nos. 256, 257 | 2432 |
| 322—224 | Chief Engr. required to take the opinion of Law Officers, as to whether Mr. Evans can be summarily discharged. | 26th Nov. No. 2,181. | ........... | None. | 2433 to 2435 |
| 325 & 326 | Estimate for restoring the Mattí Nárreddy Tank in the Cuddapah Dist., sanctioned. | 26th Nov. No. 2,182. | ........... | None. | 2435 |
| 327 & 328 | Circular from the Govt. of India, on the subject of local funds, communicated to Chief Engr. | 27th Nov. No 2,183. | ........... | 14th March 1861, Nos. 222—224. 24th April 1861, Nos. 365, 366. 23rd May 1861, Nos. 193, 194. | 2436 to 2441 |
| 329 & 330 | Letter from Chief Engr., stating that certain portion of the Dewan Khana is available for the Office of Consulting Engr. to the Irrigation and Canal Company, communicated to the latter Officer. | 27th Nov. No. 2,184. | ........... | 7th Nov. 1861, Nos. 70, 71. | 2442 |
| 331 & 332 | Authority granted for writing off a certain sum in the Public Works accounts of the Tanjore District. | 27th Nov. No. 2,185. | ........... | 30th Oct. 1861, Nos. 384, 385. | 2442 & 2443 |
| 333 & 334 | Designation of Palkonda Range to be changed into Vellore Range. | 27th Nov. No. 2,186. | ........... | Rev., 20th July 1861, Nos. 277, 278. | 2443 |

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| | | 1861. | | | |
| 335 & 336 | Permission granted by the Govt. Supt. and Controller Pier Works, to the Agent to the Pier Contractor, to resume work, approved. | 27th Nov. No. 2,187. | ........... | 10th Oct. 1861, Nos. 132, 133. | 2443 & 2444 |
| 337 & 338 | Chief Engr., required to state why the road from Putur to Pullipet, North Arcot, cannot be maintained from local funds. | 27th Nov. No. 2,188. | ........... | None. | 2444 |
| 339 & 340 | Certain allowance for preserving the line of road between Arcot and Arnee, North Arcot, sanctioned. | 27th Nov. No. 2,189. | ........... | 30th July 1860, Nos. 458 at 460. 31st Jan. 1861, Nos. 424 at 438. | 2445 |
| 341 & 342 | Sale of rejected anchors and chains, &c., supplied by Messrs. Blythe & Co., sanctioned. | 27th Nov. No. 2,190. | ........... | 23rd May 1861, Ncs. 195 to 197. 2nd Oct. 1861, Nos. 17, 18. | 2445 & 2446 |
| 343 & 344 | Chief Engr.'s Administration Report of the Madras Public Works, for the official year 1860-61, to lie over. | 28th Nov. No. 2,191. | ........... | None. | 2447 to 2509 |
| 345 & 346 | Veeramalay permitted to continue as a Sub-Overseer in Trichinopoly District, for 12 months more. | 28th Nov. No. 2,192. | ........... | 4th July 1861, Nos. 77, 78. | 2510 |
| 347 & 348 | Submission of estimate for the road from Bomally to Juggernautpooram, Ganjam District, awaited. | 28th Nov. No. 2,193. | ........... | 13th Aug. 1859, Nos. 7, 8. 16th Nov. 1861, Nos. 225, 226. | 2510 & 2511 |
| 349 & 350 | Mr. Bush degraded from 2nd Asst. Dist. Engr. to Sub-Engineer of the 1st Class. | 28th Nov. No. 2,194. | ........... | 27th April 1858, Nos. 85, 86. 18th June 1858, Nos. 30—32. 28th Aug. 1858, Nos. 83—85. 4th Dec. 1858, Nos. 86—89. 8th Sept. 1859, Nos. 81, 82. 16th Aug. 1860, Nos. 211, 212. 4th Sept. 1860, Nos. 21—22. | 2512 to 2514 |
| 351 & 352 | Letter from the Director of Public Instruction recommending that the Students of the Civil Engineering College who have not passed the standard for the grade of Asst. Overseer may be employed as Barrack Serjeant and Road Serjeant, referred to Chief Engineer. | 28th Nov. No. 2,195. | ........... | 24th Oct. 1859, Nos. 17—19. | 2514 & 2515 |
| 353 & 354 | Procs. Marine Dept., on the letter from the Agent P. and O. Steam Navigation Company, regarding certain godowns at Royapooram, referred to Chief Engr. | 28th Nov. No. 2,196. | ........... | 21st Dec. 1857, Nos. 73, 74. 13th Feb. 1858, Nos. 52, 53. | 2515 |
| 355 & 356 | Estimates for masonry works and minor channels to "Ryve's channels" in Kistna Dist., sanctioned. | 29th Nov. No. 2,197. | ........... | 4th Oct. 1860, Nos. 59, 60. Eccl. 11th May 1861, Nos. 34, 35. | 2516 to 2518 |

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| | | 1861. | | | |
| 357 & 358 | Home Despatch on the Report of the operations of the P. W. D. for the official year 1859-60, communicated to Chief Engr. | 29th Nov. No. 2,198. | ............ | From England, No. 39, dated 15th June 1860. ToEngland, No. 59, dated 25th July 1861. | 2518 to 2520 |
| 359 & 360 | Procs. Judl. Dept., regarding the Jail at Ootacamund, communicated to Chief Engr. | 29th Nov. No. 2,199. | ............ | Judl. 3rd Sept. 1861, Nos. 22—26. Judl. 20th Sept. 1861, No. 127. | 2520 to 2521 |
| 361 & 362 | Irrigation Register of the Coimbatore Dist., returned to Chief Engr. | 29th Nov. No. 2,200. | ............ | 18th June 1857, Nos. 23—26. 29th Jan. 1858, No. 52. 23rd Nov. 1858, Nos. 135, 136. 1st July 1859, Nos. 114, 115. 16th Feb. 1861, Nos. 221, 222. 5th Aug. 1861, Nos. 77, 78. | 2521 |
| 363 & 364 | Letter from the Chairman Pier Committee applying for sanction to the entertainment of a temporary establishment, with orders thereon. | 29th Nov. No. 2,201. | ............ | 10th Oct. 1861, Nos. 132, 133. | 2521 & 2522 |
| 365 | Collrs. of Salem and Trichinopoly called upon to report on the state of the road between their respective chief towns. | 29th Nov. No. 2,202. | ............ | None. | 2522 |
| 366 | Chief Engr. informed that he will be appointed Secretary to Govt. in the P. W. D. | 29th Nov. No. 2,203. | ............ | None. | Ibid |
| 367 | Chief Engr. called upon to furnish a Plan of Fort Saint George. | 29th Nov. No. 2,204. | ............ | None. | 2523 |
| 368 & 369 | Home Despatch directing that Commissary Genl. should make his own arrangement for the transport of stores instead of by Godavery, communicated to Chief Engr. | 30th Nov. No. 2,205. | ............ | 21st June 1861, Nos. 252, 253. ToEngland, No. 64, dated 13th Aug 1861. | Ibid |
| 370 & 371 | Estimate for constructing two waste weirs and under-sluices on the banks of the Roya Calwah in the Hospet Táluq, Bellary Dist. sanctioned. | 30th Nov. No. 2,206. | ............ | None. | 3623 & 2524 |
| 372 & 373 | Telegram from Govt. of Bombay, regarding the Buoys and Moorings at Tuddri and Beitkál Harbours, communicated to Chief Engr. | 30th Nov. No. 2,207. | ............ | 23rd Nov. 1861, Nos. 309 A, 309 B. | 2524 |
| 374 & 375 | Procs. Mily. Dept., approving of the estimate for certain additions and alterations to the new Commissariat Godown at St. Thomas' Mount, communicated to Chief Engr. | 30th Nov. No. 2,208. | ............ | 6th Dec. 1858, Nos. 123, 124. | Ibid |

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| 376 | A number of Papers, recorded.......... | 30th Nov.<br>No. 2,209. | | | |

# PUBLIC WORKS DEPARTMENT.

*Tabular Statement of matters of routine for the month of November 1861, Government of Madras.*

| No. | Subject and Order. | Date or Order. | Date of previous Orders. |
|---|---|---|---|
| 1 | Telegram from the Military Secretary to the Honorable the Governor, communicating a message from the Governor General requesting that Colonel Rundall may be directed to meet him at Cocanada or at Rajahmundry on the 16th instant, dated 3rd November 1861. Chief Engineer desired to instruct Colonel Rundall to join the Governor General immediately. Collector requested to make arrangements for his (Governor General's) intended visit... ... ... ... ... | 4th November. | |
| 2 | Memorandum from the Civil Paymaster, requesting that his Memorandum about the 10 days' leave granted to Mr. 1st Assistant District Engineer Lawford, in July last, be considered as cancelled and returned to him, dated 30th October 1861. Returned accordingly ... | 4th do. | |
| 3 | Chief Engineer's Endorsement, submitting an application from the District Engineer of Ganjam, for one month's preparatory leave to the Presidency, for the purpose of getting a final Medical Certificate to enable him to proceed to England, dated 1st Nov. 1861, No. 6,710. Granted... ... ... ... ... ... ... | 5th do. | |
| 4 | Chief Engineer's Endorsement, submitting for information a letter from the Acting Deputy Chief Engr. Northern Circle, with a precis of all measures taken with reference to the navigation of the Godavery, dated 22nd July 1861, No. 2,949. Lodged... ... .. ... | 8th do. | |
| 5 | Chief Engineer's Endorsement, laying before Government a statement from the Acting District Engineer of the Godavery District, showing the manner in which the steamers were employed in August 1861, dated 26th October 1861, No. 6,466. Lodged... ... ... | 8th do. | |
| 6 | Nominal Roll of men registered as passed Candidates for the grades of Assistant Overseer and Sub-Overseer in the Department of Public Works, dated 25th October 1861, No. 6,390, submitted by the Chief Engr. Lodged. | 8th do. | |
| 7 | Application from the Accountant General, requesting a copy of the Military Proceedings sanctioning the construction of two Rest Houses for Soldiers in the Kistna District, dated 31st Oct. 1861, No. 198. Furnished ... | 8th do. | |
| 8 | Memorandum from the Chief Engineer, requesting the return of all the reports on proposed cotton roads, in order that he may reply to Govt. Order, No. 2,003, of the 29th October 1861, dated 4th November 1861, No. 6,832. Returned accordingly... ... ... ... | 12th do. | |
| 9 | Chief Engineer's Endorsement, submitting through the Controller of Military Finance, an application from Sub-Conductor P. Clinton, Sub-Overseer Public Works Department, for 12 month's sick leave, dated 21st October 1861. Granted... ... ... ... ... ... | 12th do. | |
| 10 | Chief Engineer's Endorsement, submitting for information a letter from the District Engineer South Canara, reporting the departure of Mr. Sub-Engineer Boesinger to Sedasheghur on the 23rd October 1861, dated 2nd November 1861, No. 6,800. Lodged... .... | 13th do. | |
| 11 | Memorandum from the Chief Engineer, forwarding one plan and two copies of the sketch showing the whole course of the Lower and Upper Godavery, for transmission to the Home Government, dated 9th November 1861, No. 7,034. Lodged... ... ... | 13th do. | |

| No. | Subject and order. | Date or order. | Date of previous orders. |
|---|---|---|---|
| 12 | Chief Engineer's Endorsement, submitting for information a letter from the District Engineer Madras, intimating his intention to place Mr. Franklin in charge of Trunk Road No. 1, on Mr. Overseer Lee's return to duty, dated 2nd November 1861, No. 6,767. Lodged. ... ... ... ... ... | 13th November. | |
| 12A | Minute by the Honorable the President, proposing transfers of certain Officers of the Public Works Department, dated 13th November 1861. Published in the Official Gazette ... ... ... ... | 13th do. | |
| 13 | Letter from Mr. D'Rozario, late Carpenter Maistry attached to the Executive Engineer's Department, submitting for transmission to the Home Goverment a Memorial praying for Pension, dated 20th October 1861. Forwarded to the Chief Engineer, with reference to Government Order, 4th November 1861, No. 2,023, Public Works Department ... ... | 18th do. | |
| 14 | Memorandum from the Government Superintendent and Controller of Pier Works, requesting the return of the Diagram showing the position and length of the Piles from the 60th row of the Pier, dated 11th November 1861. Furnished ... ... ... ... | do. | |
| 15 | Chief Engineer's Endorsement, submitting a letter from Colonel Rundall, reporting his departure to the Godavery District, dated 15th November 1861, No. 7,249. Lodged ... ... ... ... | 19th do. | |
| 16 | Telegram from Mr. A. Fraser, First Assistant District Engineer Tanjore, requesting the Government to reserve their decision about the sums for which he has been held responsible, pending the perusal of his letter to the Chief Engineer on 9th November 1861, dated 13th November 1861. Lodged. ... ... | 19th do. | |
| 17 | Telegram from the Government of India, requesting to be informed whether or not the two lacs offered for the Godavery works in July last, were fully taken advantage of, dated 15th November 1861. Information furnished... ... ... ... .. | 19th do. | |
| 18 | Letter from the Consulting Engineer for the Irrigation and Canal Company, requesting the return of the original Indents for Tools, &c., submitted to Government, dated 7th November 1861, No. 59. Informed, that the Indent in question was sent to the Agent... | 22nd do. | |
| 19 | Letter from the Chief Engineer, promising to report shortly on the subject of the restoration of the Neringeeputt Anicut at Coimbatore, dated 14th November 1861, No. 7,170. Lodged. ... ... ... | 22nd do. | |
| 20 | Letter from the Chief Engineer, reporting on the transfer of Mr. Sage from Nellore, to the Godavery District, dated 15th November 1861, No. 7,250. Lodged ... | 22nd do. | |
| 21 | Chief Engineer's Endorsement, reporting that Captain Harington delivered over charge of the Ganjam District to Captain Phillips on the 1st instant, for publication in the official Gazette, dated 21st November 1861, No. 7,474. Gazetted accordingly ... ... | 22nd do. | |
| 22 | Return of estimates sanctioned by this Government during the month of October 1861, together with an explanatory statement of the works estimated to cost more than 1,000 Rupees each, forwarded to the Government of India ... ... ... ... | 30th do. | |

| No. | Subject and order. | Date or order. | Date of previous orders. |
|---|---|---|---|
| 23 | Letter from the Chief Engineer, reporting the sums disbursed in the month of September last, on account of the Stone Cutters who proceeded to the Alguada Reef Light House, dated 15th November 1861. Communicated to the Accountant General, with instructions to debit the sums specified to the Government of India ... ... ... ... ... | 30th November. | |
| 24 | Letter to the Government of India, on the subject in question ... ... ... ... ... | 30th do. | |

Exd. T. McMootry.

# PUBLIC WORKS DEPARTMENT.

## PROCEEDINGS OF THE MADRAS GOVERNMENT.

### *For the Month of November* 1861.

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No. 1. Read the following letter from Lieutenant-Colonel F. T. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 22nd October 1861, No. [illegible].

SIR,

1. With reference to the Order of Government No. 2,8[illegible], of the 11th instant, sanctioning the collection of materials for the construction of the Anicut and Head Works, &c., at Sunkesala, I have the honor to observe that it does not appear to have been communicated to the Accountant General and the Sub-Treasurer, who will therefore refuse to pass the Agent's drafts.

2. In their Proceedings of the 20th June last, No. 1,4[illegible], authorizing the Sub-Treasurer to cash the Agent's drafts to the extent of the estimates then sanctioned, viz., Rupees 4,00,000, the Government observe "that similar orders will be granted in future as each portion of the works is sanctioned;" but I would beg leave to suggest my original proceedings for the consideration of Government, viz., that the Accountant General may be instructed to authorize the Sub-Treasurer to cash drafts on account of all sanctioned estimates within the amount allowed in the Budget, so as to obviate the necessity of making special application for drawing money on each sanctioned estimate.

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No. 2. ORDER thereon, 1st November 1861, No. 3,0[illegible].

1. Ordered that a copy of the Orders of Government dated 11th October 1861, No. 2,8[illegible], be furnished to the Accountant General and the Sub-Treasurer.

2. Paragraph 2 of the letter will be referred to the Accountant General for his opinion as to whether there is any objection to Colonel Rundall's proposal to draw drafts on the Sub-Treasurer within the sum allowed in the Budget and without reference to the special sanction of Government.

(Signed) J. D. SIM,
Secretary to Government.

# PUBLIC WORKS DEPARTMENT.

## PROCEEDINGS OF THE MADRAS GOVERNMENT,

*For the Month of November* 1861.

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No. 1. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 22nd October 1861, No. 48 :—

SIR,

1. With reference to the Order of Government, No. 1,893 of the 11th instant, sanctioning the collection of materials for the construction of the Anicut and Head Works, &c., at Sunkasala, I have the honor to observe that it does not appear to have been communicated to the Accountant General and the Sub-Treasurer, who will therefore refuse to pass the Agent's drafts.

2. In their Proceedings of the 20th June last, No. 1,132, authorizing the Sub-Treasurer to cash the Agent's drafts to the extent of the estimate then sanctioned, viz., Rupees 4,60,000, the Government observe "that similar orders will be passed in future as each section of the work is sanctioned," but I would beg leave to suggest my original proposal again for the consideration of Government, viz., that the Accountant General may be instructed to authorize the Sub-Treasurer to cash drafts on account of all sanctioned estimates within the amount allowed in the Budget, so as to obviate the necessity of making special application for drawing money on each sanctioned estimate.

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No. 2. ORDER THEREON, 1st November 1861, No. 2,020.

1. Ordered that a copy of the Orders of Government, dated 11th October 1861, No. 1,893, be furnished to the Accountant General and the Sub-Treasurer.

2. Paragraph 2 of this letter will be referred to the Accountant General for his opinion, as to whether there is any objection to Colonel Rundall's proposal to draw drafts on the Sub-Treasurer within the sum allowed in the Budget and without reference to any specific sanction of Government.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 3. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 25th October 1861, No. 6,383 :—

SIR,

1. With reference to the Proceedings of Government, No. 1,925, dated 19th October 1861, I have the honor to submit the following report of the nature of the appointment held by Captain A. Stevens of the 18th Native Infantry, in this Department.

2. In Extract Minutes Consultation, dated 22nd March 1859, No. 675, Captain Stevens was appointed Superintendent of the Transit Operations, then about to be organized on the Godavery River, on a staff salary of 300 Rupees per mensem with the travelling allowance of a 4th Class Executive Engineer, to be paid out of the sum granted for the transport of stores. This charge he held until February 1861, when his services were placed at the disposal of Captain Haig for the Upper Godavery works, on the understanding that he was to continue to perform the duties devolving on him in connection with the Transit Operations, and that while so employed his staff salary and allowances should be charged rateably to the Upper Godavery works and Transit Operations, instead of as before, to the latter only.

*Vide* Proceedings of Government, dated 19th February 1861, No. 329.

3. It will thus be seen that Captain Stevens is not borne on the strength of the permanent establishment of the Public Works Department, but his case appears to be met in the answer to question No. 93, page 420 of the "Fort Saint George Gazette," inasmuch as the appointment he holds is so far permanent, that it is not another's vacancy he is filling, and in the event of his vacating it another Officer would have to be appointed in his stead.

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No. 4. ORDER THEREON, 1st November 1861, No. 2,021.

Referred to the Military Department, with reference to paragraph 5 of the Government Order in that Department, 4th October 1861, No. 3,598.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

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No. 5. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th October 1861, No. 6,030 :—

SIR,

1. I have the honor to submit, for the Orders of Government, the correspondence marginally noted, from the District Engineer of South Arcot, requesting permission to sell the old Travellers' Bungalow at Woolacoor, which was purchased under the sanction of Government for a sum of Rupees 189, for an Overseer's Shed, and with the proceeds thereof to erect a new shed at Madapet, on Trunk Road No. 8, about 7 miles south of the Pennár.

2 Letters from District Engr., South Arcot, Nos. 85 and 100, dated 5th and 24th September 1861.
Nos. 85 and 100, dated 5th and 24th September 1861.

2. The Woolacoor Bungalow, which is situated about 7 miles from Tindévanum, and about $2\frac{1}{2}$ miles from the Trunk Road No. 8 which formerly passed through it, has never been used as an Overseer's shed, nor is it likely that it ever will be appropriated as such. The District Engineer expects to realize about Rupees 150 by its sale, which sum will be sufficient for the construction of a new shed at Madapet. A piece of waste ground, near the road, will be obtained for the purpose free of charge.

3. Captain Foord remarks that a shed built at the proposed site "will also be useful for "the new road from Cuddalore to Trikalúr which crosses the trunk road at that place."

4. Under these circumstances, and as no actual outlay will be involved thereby, I have the honor to recommend that Government will be pleased to comply with Captain Foord's request.

No. 6. ORDER THEREON, 4th November 1861, No. 2,022.

The arrangement proposed in this letter is sanctioned on the understanding that no extra expense is caused to the State.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 7. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 24th September 1861, No. 43:—

SIR,

A Memorial from Mr. T. D'Rozario, late a Carpenter Maistry in the Executive Engineer's Office, Cannanore, praying for a pension, has been laid before me in Council. I observe that two similar applications have already been made by him to your Government and have been negatived, and no doubt for sufficient reasons. My object therefore in sending herewith a copy of the Memorial, is merely that you may inform Mr. D'Rozario that I cannot interfere in the case.

No. 8. ORDER THEREON, 4th November 1861, No. 2,023.

Forwarded to the Chief Engineer for communication to Mr. D'Rozario through the District Engineer of Malabar.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 9. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 16th October 1861, No. 5,994:—

SIR,

1. I have the honor to report for the information of Government, that consequent on the District Engineer, Tinnevelly, having represented to this Office that one Mylarumperumal Pillai, late a Sub-Overseer of the 3rd Class, 3rd Grade, was likely to prove a useful Subordinate of the Department, from his knowledge of English, his good conduct, and his aptitude and diligence in the discharge of his duties both prior to the reduction of establishments ordered in July 1857 and subsequently when employed temporarily on Public Works, his entertainment for six months as a Sub-Overseer of the 2nd Class, 3rd Grade, *vice* D'Mello resigned, was sanctioned in the Proceedings of this Office, No. 10,533, dated 1st March 1861, under the Orders of Government marginally noted.

1 Letter from District Engineer, No 197, dated 18th February 1861, with one enclosure.
1 Do. from do. No. 129, dated 12th September 1861.
1 Do. from do. ,, 144, ,, 1st October 1861.

No. 1,352, dated 13th September 1860.

2. In pursuance of this Order the Sub-Overseer entered upon his duties on the 7th March last, and as the period of his temporary employment expired on the 6th ultimo, the District Engineer in his letters, as per margin, requested that his services might be continued in consideration of his good conduct, his diligence and general usefulness, and the probability of his shortly passing the prescribed examination.

No. 129, dated 12th September 1861.
No. 144, ,, 1st October 1861.

3. As no passed candidates are obtainable to fill permanently the vacant post, I beg to recommend that Captain Winscom's request may be complied with.

No. 10. ORDER THEREON, 4th November 1861, No. 2,024.

Pending his passing the prescribed examination, and provided the services of a passed Candidate are not intermediately available for the post, the Government permit Mylarumperumal Pillai being retained for a year longer in the position of Sub-Overseer, 2nd Class, 3rd Grade, in the Tinnevelly District.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 11. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th October 1861, No. 6,074:—

SIR,

1. With reference to the 3rd paragraph of the Proceedings of Government, No. 1,818, of the 1st instant, calling upon me to report approximately, what additional expense will be necessary for Lithographing the Irrigation map of the Madras Territories, lately furnished to the Right Honorable the Secretary of State for India, I have the honor to state, that there will be no additional expense incurred for Lithographing the map in question; the present establishment of the Lithographic Department of this Office being equal to the work.

2. I would suggest that 100 copies of this very elaborate and correct map be printed, so that a few may be available for sale.

No. 12. ORDER THEREON, 4th November 1861, No. 2,025.

1. The proposal of the Chief Engineer to Lithograph 100 copies of the Irrigation map of the Madras Territories is approved. He will report what the cost of paper, &c., will be.

2. Colonel Horsley will state clearly with reference to paragraph 8 of the Despatch from the Secretary of State, dated 8th August 1861, No. 36, what arrangements he proposes to make for transmitting to the Home Government at the close of every official year 12 copies of the map corrected up to date.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 13. Read the following Endorsement of the Chief Engineer, dated Chepauk, 18th October 1861, No. 6,077:—

Read the following letter from Captain F. T. HAIG, District Engineer Upper Godavery, to Lieutenant-Colonel F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated 26th September, 1861, No. 87.

SIR,

1. In my list of those under my orders who distinguished themselves during the past year, the name of Assistant Overseer D. McGregor is entered. I beg now to bring him specially to the notice of the Chief Engineer, and to request permission to raise his pay to Rupees 150 per month from the 1st instant.

2. From the time that he first joined this District, sixteen months ago, Mr. McGregor has gone through far more hard work, exposure, and fatigue than any other Subordinate; and his cheerful endurance of not only discomforts, such as living all through a monsoon in a leaky boat, but of repeated attacks of fever, has been most praiseworthy. But it is in the intelligence, energy, and determination with which he carries forward the work entrusted to him in spite of all difficulties that he has been especially distinguished. He is at the same time methodical, accurate, and

punctual in the preparation of his accounts. In surveying and levelling he is thoroughly efficient, a qualification which I find it a great mistake to suppose that all possess who have passed through the usual course at Sappers' Head Quarters.

3. The increased pay now proposed may seem great, but I consider that he is fully entitled to it. I mentioned in a former letter that taking into consideration the fact of the Europeans employed on this river not being on the regular establishment and having no claims to the privileges of its members, while at the same time exposed to the risks of an unhealthy climate, it was matter for consideration, whether their pay ought not to be on a higher scale than that of the corresponding grades in the Department. I find, however, such great differences in the efficiency of the different men, that I would much prefer being permitted, on showing satisfactory reasons in each case, to raise the pay of those who distinguish themselves according to their merits, and, without reference to period of service or seniority. Such a prompt recognition and reward for good service will afford increased motives to exertion, ensure justice to the really deserving men, and, far more effective and cheaper European superintendence.

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Submitted to Government with the Chief Engineer's recommendation that Captain Haig's proposal to raise Corporal McGregor's salary from Rupees 60 to Rupees 150 may be sanctioned, and that the permission sought in paragraph 3 may be acceded to on the grounds on which the suggestion is based, viz., the exceptional character of the work, and the desirableness of affording every possible motive to exertion and good conduct on the part of the Subordinates employed under that Officer's orders.

1 Original letter.

(Signed) W. H. HORSLEY, Lieut.-Colonel.
*Chief Engineer.*

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No. 14. ORDER THEREON, 4th November 1861, No. 2,026.

1. Agreeably to the recommendation of the Chief Engineer the Government sanction Captain Haig's proposal to increase Corporal D. McGregor's salary from Rupees 60 to Rupees 150 from 1st September 1861.

2. Captain Haig is also permitted to raise, as proposed by him, the pay of men who may distinguish themselves, according to their merits and without reference to service or seniority, but subject to the final approval of Government to whom every case in which this permission is availed of should be duly reported.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 15. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd August 1861, No. 3,480:—

SIR,

31st May 1861, No. 1,865.
5th June 1861, No. 1,066.
27th July 1861, No. 273.

1. I have the honor, in obedience to the Orders of Government noted in the margin, to forward the enclosed Statement, showing the quantity of Stores indented for on England, for use of the Department Public Works for the years 1856-57 1858-59, the quantity received by this Office on the several Indents, as also the cost of the same, and a copy of the annual Home Indent for the year 1859-60, as specially requested. I regret to state, that the Statement is not so complete as I would wish it to be, for want of reliable information as to the actual receipts from England for the use of this Department in the above years. As the Ordnance authorities were until recently the custodians of the Public Works Stores, I have addressed the Inspector General of Ordnance and Magazines on this subject, requesting that he would be good enough to furnish me with a full and complete Statement of his actual receipts from England on account of this Department during the years in question. As soon as this information is received in the Central Office it shall be communicated to Government with a revised Statement.

2. In conclusion, I beg to state, that the practice observed in this Office in preparing the annual Home Indent is as follows: on the probable demands of the Districts being ascertained in the Central Office for the ensuing year, they are carefully scrutinized and compared with the demands and entries of previous years, after which, the general Indent is prepared and forwarded to Government for transmission to the Secretary of State.

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No. 16. ORDER THEREON, 4th November 1861, No. 2,027.

1. This letter of the Chief Engineer purports to be a reply to two Orders of Government, viz.:—

I. Government Order, 5th June 1861, calling for a Statement of Machinery, &c., indented for, received, and on its way from England.

II. Government Order, 6th June 1861, calling for the same information, and a copy of the Indent for 1859-60, to enable Government to discover whether any portion of the Stores, worth 13 lacs, believed to have been sent from England in excess of actual requirements and expectations, had been received in this Department.

2. The Chief Engineer can however only partially meet these calls. He sends a statement of the Stores indented for in the three years selected, and of the Stores which passed into the *possession* of his Department. But formerly the Ordnance authorities were the custodians of the Public Works Stores, and the Chief Engineer has not yet been able to ascertain what Stores were received or are now retained by them.

The first thing to be done is clearly to find out what Public Works Stores the Ordnance Department has. The Chief Engineer has called for a statement but it would be better, if his Assistant Captain Rawlins were to visit the Arsenal and in communication with the Inspector General of Ordnance and Stores ascertain what property belonging to the Department is still there. The Books of the Ordnance ought to show what Stores were received on account of the Public Works Department and what became of them. Once it is known what the Department Public Works have in this General Depôt, it can be decided what shall be done with any surplus Stores there may be; and future demands can be regulated accordingly. The Chief Engineer now keeps his own Stores; but this is only a recent arrangement and it is absolutely necessary to ascertain the balance of the receipts of previous years.

As regards the Indents the result of this enquiry shows that the custom of the Department in past years has been to reiterate indents from year to year, so that in point of fact there have been till quite recently, orders in England for an amount of stores very far in excess of present wants. Taking for instance the third article in the Chief Engineer's list, viz., Pickaxes 7lbs., it appears that,

| | | |
|---|---|---|
| In 1856 | 10,000 | were demanded. |
| In 1857 | 7,250 | do. |
| In 1858, | 7,250 | do., and |
| In 1859 | 9,000 | do. |
| Making a total of........... | 33,500 | |

Of these 1,000 have been received, and if the Indent of 1861-62 had not cancelled all previous demands there would still be due an amount at least four times as large as necessary.

So also with other items, Printing Presses with Types complete in 1857, twenty were demanded at a cost of 20,580 Rupees; and in 1858, twenty more were demanded; of these it would appear that two have been received, so that thirty-eight are still due. So again seventy Pile Driving Engines were demanded in 1857 (an enormous and absurd demand for a country where Piles are very seldom used), and in the same year 100 six-horse Power steam Engines were applied for. In 1858, a similar number was indented for, and in 1859, thirty more, of which 10 have been supplied,

In addition to these, twenty four-horse Power Engines were asked for in 1857, twenty more in 1858, twenty-eight more in 1859, of which also 10 have been supplied; so that there was till quite recently, an outstanding order for :—

70 Pile Driving Machines.
220 Six-Horse Power Steam Engines.
58 Four-Horse Power do. do.

The conclusions to be drawn from the returns already furnished are :—

(1.) That very little care or attention has heretofore been paid by the Department in framing Indents, that is, in scrutinizing the demands sent in from the different Districts.

(2.) That some very extraordinary mismanagement has existed with reference to the receipt and accounting for Stores. The simple facts noted above are conclusive as to the first, the difficulty of getting from the Ordnance Department the receipts of Stores for different years seems to prove the second conclusion.

The last Indent of the Department Public Works sent Home supersedes all previous Indents, so that the evil is stopped for the future, and the Government are satisfied that Colonel Horsley will strictly scrutinize the future demands of his Department.

In paragraph 2 of his letter the Chief Engineer shows how the Indents are now prepared. The basis is three years' demand. In regard to several articles however, this is too much, especially considering that there is now weekly communication with England and orders can be sent speedily. Large stocks involve much sinking of capital, and much expense in keeping the articles in good order, and they induce waste. Further, they cause delay in supplies, which come out at long intervals in small quantities instead of promptly as wanted. The system also shuts Government out from the advantage of new improvements. As regards Military Stores the case is quite different; but in the Public Works Department the allotment should be graduated according to the character of the articles, and this the Chief Engineer can easily do.

The Indent of 1861-62 is very moderate, and the form of Indent seems sufficient.

The results which have followed this partial enquiry into the Public Works Store Department render it desirable to ascertain how the Indents of other Departments are prepared. The Governor in Council therefore desires that returns in the same form as prescribed in the Government Order, 5th June 1861, No. 1,054, above recorded may be submitted by other Civil and Military Departments, with returns from the Ordnance Department of Stores received on account of each showing how these Stores have been expended and the balance in hand. The necessary orders will accordingly issue from the different Departments of the Secretariat.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 17. Read the following Proceedings of the Sudder Court, dated 26th October 1861, No. 106:—

Read again letter, dated 16th August last, from the Session Judge of Chicacole, bringing to notice the misconduct of the Head of Police of Wadadah and 1st Prosecutor Baupiah, Sub-Overseer Department of Public Works, with reference to Case No. 20 of 1861, on his calendar.

Read also letter, dated the 24th September 1861, from the Magistrate of Ganjam, replying to the Court's Proceedings of the 3rd and 11th instant, with his opinion in regard to the late Sub-Magistrate of Wadadah.

1. The Court direct that copies of the Magistrate's letter, dated the 24th ultimo, and of paragraph 12 of the letter of the Session Judge of Chicacole, dated the 16th August last, be submitted to Government in order that they may take such notice as they may think proper of the conduct of Baupiah, the Sub-Overseer in the Department of Public Works.

2. They direct the Magistrate of Ganjam to dispose of the case of the Sub-Magistrate, Oodayaghiry Rájá Row, in accordance with his own views as expressed by him in his letter of the 27th August last.

(True Extract.)

(Signed) THOMAS WILKINS,
*Acting Deputy Registrar.*

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From G. S. FORBES, Esq., Magistrate of Ganjam, to C. F. CHAMIER, Esq., Registrar to the Court of Faujdári Adálat, dated Chetterpore, 24th September 1861, No. 147.

SIR,

1. I have the honor to acknowledge receipt of an Extract from the Court's Proceedings dated 11th instant, calling upon me to give an opinion regarding the conduct of Overseer Baupiah, 1st Prosecutor in the case lately brought to the notice of the Judges.

2. I have also received the Court's Proceedings of the 3rd instant, desiring to be informed of the result of an enquiry into the charge of assault preferred by the uncle of the 1st prisoner in the above-mentioned case against the 2nd, 3rd 4th and 5th Prosecutors. The court will perceive from the accompanying copy of the (A) Report forwarded by the Principal Assistant Magistrate to the Sessions Court, that this trial was concluded on the day that the Session Judge wrote to the Court, and that Mr. Knox was mistaken in stating that no notice had been taken of it. The parties charged with assault by the prisoner's uncle were found guilty and punished by the Principal Assistant Magistrate.

3. As regards the conduct of Overseer Baupiah, I am only able to speak from the impression conveyed to my mind by these two cases in which he appears to me in the light of an oppressive and unscrupulous man ; able and willing to interfere with the impartial administration of justice at the hands of such men as the Sub-Magistrate Oodayaghiry Rájá Row.

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From T. J. KNOX, Esq., Session Judge of Chicacole, to C. F. CHAMIER, Esq., Registrar to the Court of Faujdári Adálat, dated Chicacole, 16th August 1861, No. 273.

SIR,

(Paragraph 12.) It is not in my power to do more than express my opinion that first Prosecutor Baupiah is a very unfit person to remain in the Government service. I consider him a man whose word on oath cannot be trusted, and as the fabricator of the grossly exaggerated charge, he is a disgrace to the public service, and even were he less criminal, the intense hatred his general conduct has excited renders him a very unfit person for the duties of his office in this part of the District.

(True Copies.)

(Signed) THOMAS WILKINS,
*Acting Deputy Registrar.*

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No. 18. ORDER THEREON, 4th November 1861, No. 2,028.

Forwarded to the Chief Engineer whose attention is drawn to the reports of the Session Judge and Magistrate on the conduct and character of the Sub-Overseer.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 19. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 1st November 1861, No. 6,759:—

SIR,

1. With reference to the application for additional assistance made by Captain Haig in his letter of 21st September 1861, No. 77, and to the Proceedings of Government, No. 2,013, dated 30th October 1861, I have the honor to recommend that Lieutenant Begbie of the 35th

Regiment Native Infantry may be appointed as one of the Assistants required for the work on the Shoals, and that if the Government approve, the usual application may be made to the Commander-in-Chief for his services. His Staff salary will be Rupees 150 per month with Rupees 4 per day for travelling allowance.

2. Lieutenant Begbie, as will be seen from the accompanying Certificate, was employed under Captain Forlong in the construction of the Arracan Roads, and has acquired some experience in the management of large bodies of workmen. He has passed for the Staff and for Surveying.

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No. 20. ORDER THEREON, 4th November 1861, No. 2,029.

1. Resolved that application be made immediately for the services of Lieut. G. Begbie, 35th Regiment Native Infantry.

2. There being great want of Assistants in the Upper Godavery, Lieutenant Begbie, if available, will be ordered to join forthwith.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 21. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 1st November 1861, No. 6,737:—

SIR,

1. Agreeably to the request contained in paragraph 3 of the Proceedings of Government, dated 26th October 1861, No. 1,977, I have the honor to submit the accompanying Statement showing the allotment and actual strength of the Public Works Department in North Canara, and to report that in accordance with the wishes of Government, I have transferred to that District another Overseer* duly qualified to take charge of an executive Range.

* Mr. Vardon late of Bellary.

2. With regard to an assistant for Lieutenant Fraser at the Kaiga Ghát, I would recommend that Captain A. Searle, lately appointed Acting 2nd Assistant District Engineer in the Godavery District, and who formerly served in North Canara under Captain Walker, should be transferred to that District as a Special Assistant, and paid as Lieutenant Fraser is, from the estimate for the Kaiga Ghát.

G. O., dated 21st June 1861, page 866.

3. To supply Captain Searle's place in the Godavery District, I would recommend that Mr. Supernumerary Assistant Engineer Sage be transferred from the Nellore District, where he has done excellent service in superintending the construction of the Pennár Anicut, now nearly completed, and that in consideration of such service, as well as of his general merits as an Executive Officer, which are testified to by all those under whom he has served, he be promoted to the grade of 1st Assistant District Engineer, Godavery, *vice* Mr. Tuke deceased.

4. As respects paragraph 1 of the Proceedings of Government under reply, I avail myself of this opportunity to point out with reference thereto and to the Proceedings of Government dated 19th October 1861, No. 1,927, that the existing vacancy in the grade of Sub-Engineer is in the 2nd and not in the 1st Class, and therefore that, if Mr. Boesinger be promoted to the 1st Class, he will be in excess of the authorized establishment and the Civil Paymaster will not pass his salary bill without special orders to that effect.

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No. 22. ORDER THEREON, 4th November 1861, No. 2,030.

1. The arrangements proposed by Colonel Horsley are approved and sanctioned. Captain Searle should be ordered to join forthwith at the public expense, and intimation of his appointment should be given at once to Captain Walker.

2. The Civil Paymaster is hereby specially authorized to pass Mr. Boesinger's salary as a Sub-Engineer of the 1st Class.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

No. 23. Read the following Telegram from the Commissioner of Nagpore, to the Secretary to Government, Madras, dated 2nd November 1861 :—

"Your Telegram dated 30th October received. Lieutenant Puckle respectfully declines the offered appointment."

No. 24. ORDER THEREON, 4th November 1861, No. 2,031.

Communicated to the Chief Engineer.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 25. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th October 1861, No. 6,076 :—

SIR,

1 Letter (original) from the District Engineer, Godavery, dated 12th September 1861.
Extract Minutes of Consultation, No. 1,181, dated 18th June 1857.
Extract Minutes of Consultation, No. 1,613, dated 1st July 1859.
Proceedings of the Madras Government, No. 2,007, dated 22nd August 1859.

1. I have the honor, with reference to the Orders of Government marginally noted, to forward for their final inspection and approval, the "Irrigation Register" of the late Masulipatam District, now included in the Godavery District, for the quinquennial period embracing Faslis 1261 to 1265 (1851 to 1855) both inclusive.

2. You will observe that this Register has been already before Government who returned it with their Proceedings, No. 2,007, dated 22nd August 1859, for revision. I now re-submit it, together with the District Engineer's letter; the defects pointed out by Government having been remedied, and solicit sanction for its adoption.

No. 26. ORDER THEREON, 5th November 1861, No. 2,032.

On looking into the Register the Government find that Villages Nos. 21 and 35 of the Tiruvúr Táluq have not been entered in their proper places in the body of the Register, but come after Village No. 50. These entries should be rectified. The continuation of the Táluq from page to page should also be clearly specified on the top of each page.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 27. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 16th October 1861, No. 5,970:—

SIR,

1. In accordance with the Orders of Government, contained in Extract Minutes Consultation, No. 1,877 of the 15th October 1856, paragraph 3, and in continuation of Colonel Lawford's letter, No. 5,693, dated 23rd November 1858, I have the honor to submit for sanction a bill for Rupees 425-2-9, received from the District Engineer of Godavery, for working the Paumben Dredge at Coringa and Cocanada Harbours during the year 1859-60.

* *Vide* explanation on Audit for December 1860.

2. The District Engineer explains* that the above sum is "on account of adjustment with the Workshop for articles "supplied, and which had been allowed to lie over by oversight."

3. The amount of the present bill makes the aggregate expenditure in working the Dredge, Rupees 11,925-2-2.

No. 28. ORDER THEREON, 5th November 1861, No. 2,033.

The bill for Rupees 425-2-9, four hundred and twenty-five, Annas two and Pice nine, submitted with this letter is sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 29. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 26th October 1861, No. 6,467:—

1 Letter from District Engineer Kistna, No. 77, dated 7th August 1861.
1 Do. from Supervisor Bance, No. 21, dated 20th June 1861.
1 Do. from District Engineer, No. 111, dated 20th September 1861.
1 Do. from Collector, No. 89, dated 3rd April 1861.
1 Estimate.
1 Plan.
1 Statement.

SIR,

1. With the accompanying letter the District Engineer Kistna, submits plan and estimate amounting to Rupees 870 for constructing a Calingulah to the Coornoothalah Tank in the Guntoor Táluq.

2. The Ayacut of the tank being only acres 76, inclusive of 20 acres of Inám lands, assessed at Rupees 581. I referred the subject for an expression of the Collector's opinion. The District Engineer replies by forwarding a letter from the Collector himself, requesting him to estimate for the work, as the Tahsíldár considered it necessary and as for want of it the water in the tank had been running to waste. The revenue appears to have suffered in two years out of five, and in July 1858 to have nearly failed altogether. Under these circumstances, I now forward the estimate which has been duly examined in this Office and amounts to Rupees 870, and recommend its immediate execution from the general funds at the District Engineer's disposal.

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No. 30. ORDER THEREON, 5th November 1861, No. 2,034.

Sanctioned as proposed.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 31. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 16th October 1861, No. 45:—

SIR,

1. I have the honor to forward a letter* from the Agent submitting an Indent for tools, consisting principally of Mamoties, Picks and Jumpers. An accompanying letter† from the Chief Engineer explains that the working parties are becoming large, and that there is an evident prospect of their rapidly increasing, but that the laborers are ill-supplied with tools, and that the supply obtainable in this country will not meet the demand. He therefore begs that the accompanying Indent amounting to £7,790-16-10 may receive the sanction of Government.

* No. 439 of 5th October 1861.

† No. 12 of 24th September 1861.

2. I yesterday received a Telegram from the Chief Engineer, informing me that there were 14,000 people on the work, and as I am given to understand that all are working at contract rates, it is evident that the work is popular, and that if during the cultivating season so large a body have collected together, the numbers will greatly increase after the harvest is over. It is therefore essential that the Chief Engineer should be prepared with a large supply of tools to meet the demand, and I accordingly recommended that the accompanying Indent amounting to £7,790-16-10 may be passed and returned to the Agent as requested.

No. 32. ORDER THEREON, 5th November 1861, No. 2,035.

The Government approve the Indent of stores proposed to be procured from England for the Irrigation and Canal Company's works, submitted with this letter.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 33. Read the following letter from J. H. DOPPING, Esq., Civil Engineer, to J. D. SIM, Esq., Secretary to Government, dated Strépermatúr, 15th October 1861, No. 200:—

SIR,

1. I have the honor to acknowledge the receipt of the Order of Government, No. 1,865 of the 8th instant, and beg you will thank His Excellency the Governor in Council for the offer of forwarding to the Home Government all documents necessary for a correct understanding of my case.

2. I trust that in doing so special attention may be drawn to Colonel Bell's letter of the 11th May 1859, in which he* expressed an opinion that I had shown good grounds for a re-consideration of the case.

* As Chief Engineer.

3. I beg I may be excused for again observing that my removal from Arcot was ordered without any previous reference to the Central Office as to my management of the District, and that in Sir Charles Trevelyan's Minute of the 23rd May 1859, he remarks that it was I who "pointed" out the confusion to the Chief Engineer.

4. If his Excellency had been as well acquainted with Ramanjooloo Pillai's character at that time, as I have reason to believe he was subsequently and as I hope ere this the other Members of Government now are, I am sure he would not have allowed Mr. Peachey's allusion to us both to have been passed over with a simple remark that he only gave utterance to a general opinion where he had previously stated " the data afforded confirmed the statement."

5. With reference to the 2nd paragraph of the Order now under acknowledgment I beg you will inform His Excellency in Council that I passed the prescribed Vernacular examination on the 27th of September.

6. It is quite true my Covenant only guaranteed £400 but I left London on a distinct understanding with the Honorable Court of Directors that my salary would be at once raised to the same as the others £600, and that our promotion would then go on at the rate of £50 per annum, and an offer was made to me by, I think, Mr. Bourdillon, that I might remain at Home until the following year when some more Engineers on the higher salary would be sent.

7. While however making these remarks I trust I may not be considered ungrateful for the promotion which I had received previous to Mr. Peachey's report up to which date I flattered myself I had earned the good will and confidence of Government.

8. In conclusion if I am not trespassing too much upon your kindness I should feel much obliged if you would let me have a list of the records which are about to be forwarded to the Home Government.

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No. 34. ORDER THEREON, 5th November 1861, No. 2,036.

Mr. Dopping was informed in the Order of Government dated 8th October 1861, No. 1,865, that if he thought fit to appeal to the Home Authorities, the papers connected with his case would be forwarded by Government. The Government do not intend laying any statement of his case before the Home Government.

(Signed) J. D. SIM.

No. 35. Read the following letter from G. J. SHAW, Esq., M. D., to J. D. SIM, Esq., Secretary to Government, dated Madras, 31st October 1861:—

SIR,

1. I have the honor to request you will do me the favor to submit, for the consideration of Government, the following circumstances connected with the establishment of the District Engineer's Workshops in the immediate vicinity of my present residence at Egmore, which has caused me much inconvenience, and if allowed to remain will seriously affect the value of my property.

2. The site of the present District Engineer's Office and Workshops was occupied as a private dwelling house when I purchased the property from Colonel Montgomery in 1856, and was only appropriated to its present use by the late Colonel Atkinson of the Engineers during my temporary absence in Europe in 1857 or 1858.

3. On my return to India I at once complained to the Chief Engineer in the Department of Public Works, (Colonel Bell) of the noise caused by the introduction of a large body of native workmen hammering wood, and moving about large masses of timber with shouts from morning till night, with the additional annoyance produced by the cries of the Watchers on the premises during the night.

4. I have subsequently addressed Lieutenant-Colonel Hitchins the District Engineer, and Colonel Horsley on these points, and the latter most kindly after inspecting the locality promised to endeavour to have the Workshops removed to a more suitable position as speedily as possible.

5. As however, upwards of three years have elapsed, and there seems but little likelihood of the nuisance being abated, I am under the necessity of appealing direct to Government; for in addition to the injury and inconvenience I sustain personally, I consider it very objectionable in a sanitary point of view that these Workshops should continue in the midst of private dwelling houses as they are at present.

6. I am informed by Dr. Aitken, who occupied Mr. Smoilett Clerk's house which is also contiguous to the workyard, that the cleaning of the Necessaries erected for the use of the workmen, rendered the lower part of the house uninhabitable for the time, and this process being repeated daily, the nuisance was intolerable.

7. As the Workshops are only of a temporary nature, mere thatched sheds, and the house is rented monthly I have the less hesitation in pressing upon Government the expediency of removing the Workshops to another situation where the evils complained of would not exist, viz., annoyance to the occupants of dwelling houses and injury to the value of private property.

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No. 36. ORDER THEREON, 5th November 1861, No. 2,037.

1. Forwarded to the Chief Engineer for any remarks he may wish to offer.

2. Colonel Horsley will also state what necessity there is for the District Engineer having a Workshop, and why he cannot have his work performed by Contract.

3. The Government desire to be informed whether Colonel Hitchins' Office cannot be located in Chepauk.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 37. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th October 1861, No. 6,031 :—

SIR,

1. I have the honor to request that you will inform me whether the Mechanical Engineers named in the margin, are entitled to receive the usual clothing according to their rank as Warrant Officers of the Indian Navy, and if so, what is the amount of compensation given in lieu of such clothing. These men all came out from England about three years ago, under Covenants similar to the one herewith sent for perusal, and which I request may be returned.

| | | |
|---|---|---|
| Mr. J. Flockhart, | Mechanical Engineer, | 1st Class. |
| " W. Wait, | " | " |
| " A. Thompson, | " | " |
| " T. Goodsir, | " | " |
| " D. Drummond, | " | " |
| " J. Walker, | " | 2nd Class. |
| " T. Martin, | " | 3rd " |
| " W. Pye, | " | " |
| " S. Hodson, | " | " |
| " R. Bunting, | " | " |
| " G. Clements, | " | " |
| " J. Nowland, | Boiler Maker, | 1st Class. |

2. From this document you will perceive they were appointed "by Warrant in such "manner and under such regulations as the Governor in Council of Bombay shall direct or "approve, after the manner of the appointment by Warrant of the Officers of the Indian Navy," and there is no doubt they are amenable to all the rules and discipline of the Service as Warrant Naval Officers.

3. They claim two full suits of clothes per annum from the date of entering the Service; and although there is nothing on the subject in the "Bombay Naval Code," yet they say that all the other Mechanical Engineers, whether at Sea or in Dock in the Bombay Navy receive clothing, and I believe such to be the fact.

4. Under these circumstances it appears to me that the men are entitled to clothing or to compensation in lieu thereof, but as there is no direct order on the subject, I have had no alternative but to address Government on the subject, and I await their orders.

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No. 38. ORDER THEREON, 5th November 1861, No. 2,038.

Resolved that the Chief Engineer be requested to refer to the authorities at Bombay and find out all particulars regarding the supply of clothing and other privileges of Officers of this class, and communicate the result to the Government and the Civil Paymaster.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 39. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th October 1861, No. 6,033 :—

SIR,

1. As promised in the latter part of my letter to Government, No. 351, dated 9th May 1861, I have now the honor to submit the reports of the District Engineers of Malabar and Ganjam upon the result of their experiments in the use of the solution patented by Mr. Ransom for préserving stone and other building materials.

1 Report from District Engineer Malabar, 16th May 1861, No. 26.
1 Do. from Ganjam, dated 7th September 1861, No. 170.

2. The District Engineer of Malabar tried the solution on a chunam wall of the European Guard-room, and on a laterite (pointed in chunam) wall of an Officer's Godown at Calicut. Also upon a portion of the basement of a Racket Court wall built of laterite stone. That Officer, however, considers that none of these experiments can be considered fair tests, until the lapse of some years shows the varying effects of the climate upon the solution. From what he had seen, he was of opinion that its application did not appear to have been of much use in harden-

ing the chunam, but that the effect was better on the Racket Court laterite wall, and he concludes with the following remarks: "a thin milky film is deposited which makes the surface of the stone "in a slight degree harder and less susceptible of indentation or of showing marks from a "sharp pointed instrument. It also crumbles less readily where the wash has been applied. In "the case of the chunam plastered wall the difference is scarcely perceptible."

3. The District Engineer of Ganjam reports, that he very carefully instructed Mr. Sub-Engineer Colquhoun, how to use the solution; and that after about 6 months' trial that Officer states he used it as ordered, and that "in each instance although exposed to a damp atmosphere, "a solid white coat was rapidly deposited, and had apparently become permanently adhered, and "that it appears to him that if the thickness of the coat could be gradually increased, decaying "material might be preserved." Unfortunately this District Engineer was only able to experiment with a small quantity of the solution, in consequence of the leakage from one of the tins containing the ingredients on their voyage from Madras to Ganjam.

4. My opinion generally upon the subject is, that the solution can be advantageously used on buildings constructed of soft decaying stone, which, however, is not commonly used for building purposes in this Presidency, as most Government buildings are constructed of brick in chunam, and coated generally with a plaster of the latter material, which affords sufficient protection to the bricks.

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No. 40. ORDER THEREON, 5th November 1861, No. 2,039.

Ordered to be brought to the notice of the Secretary of State, with reference to Lord Stanley's Despatch, dated 26th May 1859, No. 9.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 41. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th October 1861, No. 6,032:—

SIR,

1 Letter from District Engineer Nellore, No. 1,550, dated 3rd September 1861.
1 Estimate.
1 Letter from the Inspector General of Mufassil Police, dated 3rd May 1861, with one enclosure.

1. Referring to my letter No. 11,175, dated 21st March 1861, I have the honor to forward an estimate amounting to Rupees 130 for converting the new place of Arms at Ongole into offices for the Postal, Telegraph and Police Departments.

2. The arrangements now proposed which allow two rooms to each of the above Departments are somewhat different from those reported in my letter above quoted, but have met the approval of the Officers concerned, as will be seen by the enclosed correspondence, with the exception of the permanent Verandah, which they wished to be put up on the west side of the building. Captain Marshall, the Officer of the Range, finding that this work would necessitate the dismantling of part of the roof of the present building, as well as involve a considerable expense, has allowed for only a Pandal in the estimate, which he considers will answer the purpose equally well for the present. I beg accordingly to solicit the sanction of Government to the above outlay of Rupees 130, which is being carried out from the repair funds of the District.

3. The District Engineer has been requested to report whether accommodation may not be obtained for a Range office and Store for the Executive Agent of this Department, in the *old* Barracks at Ongole, as originally recommended by me in the Statement accompanying letter No. 4,657, dated 11th September 1860. His reply will be duly reported. At present there is no accommodation for the Range office, and Captain Mullins in a late letter applied for sanction to rent a small building for the purpose.

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No. 42. ORDER THEREON, 5th November 1861, No. 2,040.

Under the circumstances stated, the estimate amounting to Rupees (130) one hundred and thirty is sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 43. Read the following letter from W. M. CADELL, Esq., Collector of Tanjore, to J. D. SIM, Esq., Secretary to Government, dated Vallam, 31st July 1861, No. 437 :—

SIR,

With reference to the Order of Government of the 22nd July, No. 1,349, I have the honor to annex copy of an official communication addressed to me by Lieutenant W. Munro of the Sappers and Miners, and as I presume at the instance of Serjeant O'Donoghue, I have only to add that I have done nothing nor had I intended doing anything in the matter under the impression that my duty was at an end when I had brought the circumstance therein referred to to the knowledge of Government.

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From Lieutenant W. MUNRO, Commanding F. Company, Sappers and Miners, to W. M. CADELL, Esq., Collector of Tanjore, dated Tonghoo, 27th April 1861, No. 85.

SIR,

1. I have the honor to request you will call on Mr. Shunker, Munsif of Tranquebar, to deliver to you a Bond for two thousand Rupees granted by a person, named Daver of Ockada a Mirásidár in the Collectorate of Tanjore to Serjeant M. O'Donoghue of the F. Company Sappers and Miners for money lent. This Bond was entrusted by Serjeant M. O'Donoghue on his leaving the Public Works to join the Sappers Head Quarters in March 1860 to Mr. Shunker to collect the amount for him. Serjeant M. O'Donoghue complains that, after the receipt of a letter from Mr. Shunker which I forward he has written several times to have the Bond returned, but without effect.

2. I have also the honor to request that, on obtaining the Bond, you will be good enough to call on the man to pay the amount, and in the event of his refusal that you will take what steps you deem fit for its recovery paying any expenses incurred out of the sum claimed. The names of the witnesses to the Bond, are 1st, Joseph, a Christian Writer living with the Revd. Mr. Gallo of Tanjore, and 2nd, Mauria Pillai Maistry residing at Triviar. Serjeant M. O'Donoghue admits having received six hundred Rupees in part payment of the sum entered in the Bond the receipts for which are also in Mr. Shunker's possession. Should you be unable to adopt this course, I request you will return the Bond and receipts to me and point out the steps Serjeant O'Donoghue should pursue to recover the sum.

No. 44. ORDER THEREON, 5th November 1861, No. 2,041.

The Collector will decline to interfere in this matter; and Lieutenant Munro will be informed that he has erred in addressing the Collector on the subject.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 45. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 22nd October 1861, No. 6,221 :—

SIR,

1 Letter from the District Engineer South Canara, No. 271, dated 29th April 1861.
1 Do. No. 44, dated 19th June 1861.
1 Do. No. 95, dated 27th Aug. 1861.
1 Plan.
1 Estimate.
1 Specification report.

1. In a letter dated 29th April 1861, No. 271, the District Engineer South Canara suggested the expediency of substituting a masonry for a timber bridge over the Cadambala River on the Munjerabad Ghát road, which forms Item No. 215 of Budget Statement No. 2 of 1861-62. He estimated the cost of a structure of the former description at Rupees 5,870, or Rupees 1,800 in excess of the sanctioned sum (Rupees 4,070) for the latter, and he advocated the change in the following terms:—" The extra cost will be saved in a short " time as a timber bridge will probably have to be entirely renewed in five years, if it is not in the " meantime destroyed by fire or other accident, as others have already been, much to the incon- " venience of the traffic on the road from Munjerabad to Mangalore."

Sanctioned, 12th September 1859, No. 2,185.

2. Captain Moberly reports that the increased funds required for the contemplated change of structure can be provided from the allotment of Rupees 4,000 for the improvement of the road from Oopinangadi to Mani, (Butwall in Budget) Item No. 185 in Budget Statement No. 2 of 1861-62, as the further expenditure required in this year to complete the work on that road is only Rupees 265, the outlay in 1860-61 having been Rupees 7,697. The amount which will thus become available is Rupees 3,735, which will meet the excess referred to above, and at the same time enable the District Engineer to make increased provision for the Collector's Kacheri at Mangalore, for which work only Rupees 1,000 have been made available in 1861-62.

| RS. |
|---:|
| 4,000 |
| 265 |
| 3,735 |

3. For the reasons stated by the District Engineer I am of opinion that it is advisable to construct a masonry in lieu of a timber bridge, and I accordingly recommend that authority may be granted for the change, funds being provided as suggested by that Officer. Revised plans and estimates are herewith forwarded for the work, which have been duly examined and corrected in this Office.

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No. 46. ORDER THEREON, 5th November 1861, No. 2,042.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 47. Read the following Endorsement of the Chief Engineer, dated Chepauk, 19th October 1861, No. 6,143:—

Read the following letter from Captain A. S. MOBERLY, District Engineer of Madras, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer Central Circle, dated Guindi, 6th September 1861, No. 741.

SIR,

1. With reference to Memorandum No. 1,795 of the 21st June, forwarding Proceedings of Government, No. 1,098 of the 14th idem, I have the honor to submit a revised plan and estimate for a Calingulah for the Karekelavakam Tank supply channel, countersigned by the Collector; also a copy of a list received from the Collector showing the Ayacut and cultivation during the past ten Faslis.

2. As regards paragraph 4, I beg to state that the estimate of Rupees 952 for earthwork has been carried out and to inform you that the Collector states "that it has "never been usual for the Ryots to afford any assistance towards the execution of "Tank repairs. They contribute in the shape of Tank Merahs, which, on a rough "estimate, amount to Rupees 40,000 per annum, and they expect that the Government "will keep the irrigation works in order, without further assistance on their part. In this "year's Budget, the Tank Maramut has been entered at 35,000 "Rupees, so that, in fact this repair costs the Government "nothing. The Ryots, in addition to this contribution, generally "perform the customary work, enumerated in paragraph 25 of "the new Code, Department Public Works, communicated in "the Board's Circular, No. 1,778."

| | Rs. |
|---|---|
| Irrigation Canals | 3,000 |
| Tanks | 35,000 |
| Dykes | 856 |
| Total | 38,856 |

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1 Estimate.
1 Specification.
1 Plan.
1 List of Ayacut, &c.

1. Submitted to Government with reference to their Proceedings, No. 1,098, dated 14th June 1861, and with a request that under the explanation therein afforded the revised estimate Rupees 1,240, may now be sanctioned in the manner proposed in paragraph 5 of letter from this Office No. 1,097, 1st June 1861.

2. It is observed that the signature of the Collector was affixed to the original estimate, and as that submitted with letter, No. 1,097, dated 1st June 1861, was simply revised *in this Office*, it was presumed that any further signature of the Collector would not be required.

3. The revenue under the Karakelavakam Tank has been verified by the Collector and is found to be less than was stated in paragraph 3 of the above letter, while the extent of cultivation on the other hand is considerably more.

4. The amount of expected increase of the work to be carried out, is estimated at Rupees 236, see specification accompanying estimate.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 48. ORDER THEREON, 5th November 1861, No. 2,043.

Under the explanation submitted the Government sanction the estimate amounting to Rupees (1,240) one thousand two hundred and forty, for the construction of a Calingulah to the

Karekelavakam Tank supply channel in the District of Madras; the charge being met from the repair funds of the District for the current year.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 49. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th October 1861, No. 6,042;—

SIR,

1 Letter from District Engr., Kistna, No. 289, dated 18th March 1861, with 1 enclosure.
1 Do. from do. No. 116, dated 30th September 1861, with 1 enclosure.

1. I have the honor to report for the information of Government, that in his letter No. 289, dated 18th March 1861, the District Engineer Kistna recommended the employment of one T. Veraswámi as a temporary Sub-Overseer, 2nd Class, 3rd Grade.

2. The grounds of the District Engineer's recommendation were, that Veraswámi had been originally employed as a Maistry at the Godavery; that he was subsequently (in the year 1852), employed in the same capacity on the Gannaveram Aqueduct, and since the completion of that work, on the Bezwada Anicut and canal works at Caukipadú, Viranki, Nidumolú and Akúmarrú; that he possessed a fair knowledge of a mason's work of bricklaying and carpentry; that he was able to prepare simple drawings, to frame estimates from them, to lay down and construct a building from working drawings and specifications, and to direct workmen; that he understood Telugu and would be able, with a little practice, to keep accounts in that language; that he was physically fitted for the active duties of the Department; that his conduct had always been unexceptionable; and that although from his ignorance of English it was not probable that he would be able to pass the prescribed examination, yet that from his general intelligence and practical knowledge of ordinary kinds of work he was likely to prove a useful Subordinate.

* Vice Milbanks dismissed.

3. Under these circumstances and agreeably to the District Engineer's recommendation, the temporary employment* of Veraswámi as a Sub-Overseer, 2nd Class, 3rd Grade, for a period not exceeding six months was authorized in the Proceedings of this Office, No. 11,522, dated 30th March 1861, under the authority conveyed by Government in their orders No. 1,352, dated 13th September 1860.

4. In pursuance of the foregoing Orders, Veraswámi entered upon his duties on the 2nd April 1861, and as the period of his temporary employment authorized by this Office expired on the 1st instant, the District Engineer requests that the sanction of Government may be obtained for his continued employment.

5. As Verasáwmi's conduct has been satisfactory, and as he has proved himself exceedingly useful during the time of his employment in the Kistna District, and as no passed Candidates are forthcoming, I request that authority may be given for the continued employment of Veraswámi as a temporary Sub-Overseer, 2nd Class, 3rd Grade, until the services of a passed Candidate are available to fill permanently the vacant post.

No. 50. ORDER THEREON, 5th November 1861, No. 2,044.

Sanction is granted for the continued employment of T. Verasáwmi as a temporary Sub-Overseer, 2nd Class, 3rd Grade, in the Kistna District for a further period of one year, if the services of a passed Candidate for the post are not intermediately available.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 51. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 26th October 1861, No. 6,468 :—

SIR,

1 Letter from District Engineer, No. 682, dated 30th August 1861.
2 Abstract estimates.

1. I have the honor to forward for submission to Government, two estimates amounting together to Rupees (92) ninety-two, for the undermentioned works in the District of Madura, viz. :—

| | RS. | A. | P. |
|---|---|---|---|
| 1. For re-building the Choukedár's Shed at Vyravanathapúram Salt platform... | 76 | 0 | 0 |
| 2. For constructing a Watchman's shed at Ogandangoody Salt platform... ... | 16 | 0 | 0 |
| Total... | 92 | 0 | 0 |

2. Provision is made in the estimate for the former work, for mud walls with thatched roofing and jungle wood verandah posts, as the walls and roof of the present Shed are in such a dilapidated condition, as to require immediate re-construction.

3. The estimate for the Ogandangoody Shed provides for thatched roofing to be supported on palmyrah posts.

4. The Collector has countersigned the estimates in token of approval, and they have been examined in this Office and found correct. I request, therefore, Government will be pleased to accord early sanction to them, the total amount Rupees (92) ninety-two, to be defrayed from the general funds placed at the disposal of the District Engineer of Madura for expenditure during the current official year.

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No. 52. ORDER THEREON, 5th November 1861, No. 2,045.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 53. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th October 1861, No. 6,513 :—

SIR,

1 Survey.
1 Report from Mr. Dopping, No. 57, dated 7th June 1861.
1 Minute by Colonel Rundall.
1 Letter from Mr. Dopping, No. 61, dated 27th June 1861, with one enclosure.
1 Abstract estimate, Rupees 4,27,500.
1 Longitudinal and transverse section.
2 Sketches.
6 Plans of bridges.

1. In continuation of my letter of the 22nd June last, No. 1,840, I have the honor now to furnish further information relative to the line for the Junction Canal from the Adayár to the Kúam as surveyed and estimated for by Mr. Dopping.

2. The plans of the masonry works are still incomplete, and the estimates not prepared agreeably to the rules in force in the Department; but as so much time has already been occupied in their preparation and examination, I do not consider it desirable to detain them any longer, especially as it is apparent that there will be no economy in adopting this line.

3. It will be seen from the survey and report, the canal, as proposed, leaves the Kúam 700 feet west of the Marine Villa, passes close to the Chepauk Palace and crosses at an open place the new road from Triplicane to the beach; from thence, passing over the "north drain," the line runs almost parallel with Venkatá Runga Pillai street, through the firewood depôt, and across the broad road from Royapetta to the Ice House on to the south drain, and passing close west of Capper House crosses Elliot's road at a point about 300 yards from the beach. Thus far the canal is nearly straight, but from hence it takes a curve into St. Thomé, across the road from Barbers' Bridge to the sea, passing Carananserai street at a spot free from houses. From thence it intersects a Mahomedan burial ground, crosses Mylapore Kacheri street and passes about 100 feet west of two Roman Catholic Chapels, and curving to the east crosses two streets and enters the backwater close to Anthony's Chapel, from whence it follows the backwater parallel to the Adayár road and enters the river itself about 200 feet west of Mr. Dalrymple's house, being a total length from river to river of 6,923 yards.

4. The dimensions allowed are the same as proposed for the inland line, viz., a width of 45 feet at bottom, with slopes of 2 to 1, the bed of the canal being 4 feet below mean tide.

5. The estimated cost being for earthwork, inclusive of four basins and dredging in both the Kúam and Adayár

| | RS. |
|---|---|
| 5. The estimated cost being for earthwork, inclusive of four basins and dredging in both the Kúam and Adayár | 61,500 |
| For masonry, consisting of twelve bridges and three syphon sluices | 3,02,600 |
| Compensation for houses and trees | 63,400 |
| | 4,27,500 |

6. The estimated cost of the inland line sanctioned by Government on the 14th February 1860, No. 344 and on which a provision of Rupees 1,50,000 was made in the Budget of 1860-61, is as follows, viz. :—

| | RS. |
|---|---|
| Earthwork, inclusive of removal of spoil to a distance, trimming banks, turfing, and sundries | 1,03,210 |
| Masonry, including six bridges, water-shoots for drainage, under-tunnels for irrigation, wharves, and landing platforms, and stairs. | 1,33,334 |
| Making road-way along bank, and planting avenue | 46,756 |
| Compensation for land and houses | 76,000 |
| | 3,59,300 |

7. In the estimate of the coast line, provision has been made for 12 bridges, six of 18 feet, five of 15, and one of 30 feet width in the clear between the parapets.

8. For a city where there is so much quick traffic, I am of opinion the width of 15 feet is insufficient. There should be also two more bridges allowed for, at streets marked A and B in survey; but the provision made for the discharge of the sewage is wholly inadequate; and I am of opinion that were the project carried out without several additional works, the canal would become, as was formerly represented by Colonel Faber,* "one immense offensive sewer." No provision has been made either for wharves and landing places, or for putting the banks into section and removing the spoil to a distance, when from the depth of cutting, as in Triplicane and St. Thomé the excavated earth will be too much to admit of banks being thrown up at the spot. These additions would at least bring the estimate up to 5 lacs.

* *Vide* Report, dated 22nd December 1856, No. 9,081.

9. In the inland route there are only six bridges allowed for, but it would be desirable, if the low level canal be carried out, to add six more for the bye roads; at these, however, only small bridges will be required of the design estimated by Mr. Kennedy at 12,000 Rupees each. These would increase the estimate by 72,000 Rupees, but against this, the item for making roads, Rupees 45,000, may be set off, for as there are already roads running close by, parallel with the canal, there is no necessity to make new ones, which would leave the estimate to be increased by only 27,000 Rupees, making it Rupees 3,86,000 against 5 lacs, the cost of the coast line, or Rupees 1,14,000 in favor of the inland route. The line surveyed for the coast route interferes more too with house property,† and I am inclined to think that the sum allowed for compensation therein is insufficient.

† Besides passing through three Native burial grounds.

10. In his letter of the 22nd June 1861, No. 1,840, reporting that a portion of the estimates had been received from Mr. Dopping, and that according to them and a comparative statement framed by himself, the estimates were in favor of the coast line, Colonel Birdwood mentioned that explanation had been called for on certain points which were not clear, in reply to which, Mr. Dopping explained that he had based his comparison on an estimate of Mr. Kennedy's for a *high level* line, to which he himself had made sundry additions, and thereby increased its cost. The actual result is, however, as shown above.

11. Independent of its being the cheaper and shorter line, the inland route is in my opinion the best, as it runs through the heart of the city, and will therefore prove of greater use for one of the purposes for which it is planned, viz., a line of communication from one end of the city to the other, and as such it will no doubt be extensively used. One objection which has been raised to this line as a salt water canal, and which I believe to have some weight, is the probable ill-effect which would be produced on the wells in the neighbourhood, and for this reason I am of opinion that it would have been preferable to adhere to the original design of a high level *fresh water* canal. The cost of this would be less and the comfort to the inhabitants of the city in having a fresh water canal running along its whole length invaluable. The accompanying Minute from Colonel Rundall, to whom the consideration of this subject has fallen during Colonel Boileau's absence, reviews the whole question, and I beg to forward it for the consideration of Government.

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From J. H. DOPPING, Esq., Civil Engineer, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Madras, 7th June 1861, No. 57.

SIR,

1. In accordance with the instructions contained in the Proceedings of the Chief Engineer, No. 7,771 of the 8th of December last appended to an Order of Government of the 4th idem, I have the honor to furnish the following report as the result of my examination of the coast line for a proposed canal between the Kúam and Adyár Rivers.

Estimates and abstracts of estimates for 12 bridges of 30 feet span and 18 feet and 15 feet road-way.
Estimates and abstracts of estimates for 12 bridges of 2 arches of 35 feet span and 18 and 15 feet road-way.
Estimates and abstracts of estimates for 3 syphon.
Abstract of the above.
Comparative statement showing the cost of the coast line as compared with Mr. Kennedy's line.
Survey and section of proposed coast line.

2. On the accompanying survey you will perceive the line, now specially referred to, commences at the Kúam at a distance of about 700 feet west of the Marine Villa, and passing close to the Central Office crosses the new road from Triplicane to the Beach at right angles and at a spot where there are no houses just at present.

Line marked out on accompanying survey commencing near Marine Villa.

3. From thence having passed over the Triplicane north drain it proceeds through the Firewood Depôt and crossing Agrarum and Aroomootoo streets and running almost parallel with Venketa Runga Pillai street, it crosses the road from Royapettah to the Ice House at a point about 70 feet east of the junction of the above-mentioned street and this road.

Ice House road.

4. Still continuing in the same direction it passes over the south Triplicane drain, and going west of the Capper House, crosses Edward Elliot's road at about 900 feet from the sea road.

Edward Elliot's road.

5. Up to this point the canal would be almost a mathematically straight line.

6. South of this, crossing the channel and road from Barbers' Bridge to the Sea with a very easy S curve, it passes Caranasvaren street at a spot also, at present, free from houses.

Saint Thomé, Caranasvaren street.

7. Now curving slightly to the west and passing through a Mahomedan burial ground, it crosses Mylapoore Kacheri street at about 100 feet west of two Roman Catholic Chaples, and then curving rather rapidly to the east and passing through some, so called Náwáb's ground, it crosses Moothoo Gramnee street and Tandavary Gramnee street, where there are no houses except a "Toddy" shop and a house of 18 Rupees annual valuation.

Mylapoore, Kacheri street.

Moothoo Gramnee street.

Back-water south of Saint Thomé.

8. Entering then upon the back-water east of and close to Saint Anthony's Chapel, it passes through this back-water parallel with the road from Saint Thomé to the Adayár, and joins the Adayár at a point about 200 feet west of Mr. Dalrymple's house, being a total distance, from river to river, of 6,923 yards.

Enters the Adayár near Mr. Dalrymple's house.

9. Having now explained the direction, I shall proceed to remark upon the particulars of this Coast line having returned again to the Kúam.

Bottom is shown on accompanying Section to be 4 feet below mean-tide.

10. On the accompanying section you will observe the bottom of the proposed Canal, shown in red, at a depth of 4 feet below mean-tide, that being the depth decided on for the other line from "Ashton Richardson's "to Pugh's Garden."

11. To suit this depth the estimate has been calculated, allowing for a bottom of 45 feet in width and side slopes of 2 to 1, and the bridges have been allowed foundations of 6 feet, on wells of 6 feet in depth, with 18 feet water-way and two towing paths each of 6 feet, and head room of 12 feet above mean-tide.

Bottom of 45 feet in width.
Bridges 18 feet water-way.

Greatest cutting in Chepauk compound will be 15·36 feet and average 12 feet.

12. The greatest depth of cutting in the Chepauk compound will be 15·36, but the average will be under 12·0 feet.

13. In the next piece between Triplicane Road and Agrarum street, the average is also under 12 feet.

14. In the portion between Agrarum street and Arroomootoo street the average will be however about 20 feet.

15. This certainly is considerable, but is only for a short distance.

16. Between Arroomootoo street and the Ice House road, there will be an average of 15 feet, but between the Ice House road and the south back-water, the average will be under 12 feet.

17. Rising again towards "Edward Elliot's" road and falling towards "Barbers' Bridge" back-water, another average of 12 feet may be assumed as far as Caranasavaren street.

Depth of cutting at Mylapoore "Kacheri" street 27·21 feet.

18. From thence it rises gradually to Mylapoore Kacheri street, at which point the depth of cutting reaches 27·21, but the average may be assumed at about 20 feet.

19. This is by far the most expensive part of the entire line, including, as it does, a very costly bridge for Mylapoore Kacheri street (Rupees 16,700.)

20. From this point, however, fortunately, the ground falls very rapidly as far as Moothoo Gramnee street, where the depth of cutting only comes to 14·34, and a short distance south only to 9·81 feet.

21. This depth, namely 9·81, continues as far as the north end of the back-water (south of Saint Thomé) where it falls as low as 5·86, and even to 1·96, opposite the bridge on the Adayár Road.

22. From this point, as far as the turn in the Adayár Road, the average will be under 7 feet.

"Skew" bridge would be required for the Adayár road unless the road is altered.

23. As the proposed line crosses this road at a considerable "skew" an alteration in the road will be necessary to suit the proposed bridge, and an allowance for the earthwork has been accordingly made in the estimate for that work. Between this point and the Adayár the cutting will average about 6 feet.

Reasons for entering Adayár so much below the Elphinstone Bridge.

24. I should here remark that I was induced to make the proposed line join the Adayár *here*, instead of somewhat higher up, viz., near the Elphinstone Bridge as shown upon the survey forwarded by the inhabitants of Mylapoore, for the following reasons.

25. (*1st.*) The river seems to have a natural depth *here* caused by the island opposite, and the mouth of the proposed canal is therefore, not so likely to become silted up.

(*2nd.*) The river on the south side, at the bridge, is much deeper than on the north side, and, of the entire number of arches of the bridge, there is only one, and that, the extreme south, (large one) which is available for navigation.

26. In the event therefore, of there being a slight current in the river, it would have been very difficult for a boat to have "made" the mouth of the canal (if higher up), having once passed through the bridge on the south side, whereas the site, lower down the river, gives an opportunity of taking advantage of any arch that may be available for navigation.

27. Besides, the ground is of comparatively no value, and the depth of cutting much less.

28. There is another and final reason which may be well worth consideration, and allusion to it may not be out of place just now.

29. West of the road from Saint Thomé to the Adayár, there is an extensive tract of ground which is almost valueless, from the fact of its being subject to being covered by salt water.

Foundation of a tank instead of the back-water south of Saint Thomé.

30. By a careful arrangement of the "spoil" when excavating the canal parallel with this road, the sea could be effectually shut out, and the fresh water which comes into it might be retained so as to form a tank.

31. An additional supply might be taken from the Adayár if required.

Basins.

32. In the estimate for earthwork for the canal, I have allowed for the conversion of a large bowrie, or tank, in the Chepauk compound, near the Central Office, into a basin, and for

the formation of one at the Firewood Depôt, one at Vencatarunga Pillai street, and one close to Saint Thomé, on the south side, near Saint Anthony's Chapel, at a cost, collectively, of 1,740-11-6.

Estimate for earth work basin included amounts to Rupees 51,596.

33. Including these Basins, which will not be required unless the traffic is very much increased, the estimate for earthwork amounts to Rupees 51,596, or omitting them, to Rupees 49,855-8-5.

Cost of dredging the Kúam and Adayár Rivers.

34. The cost of dredging or deepening the bed of the Kúam and Adayár Rivers, I have estimated, from soundings, to be Rupees 4,482,* Annas 8 for the one, and Rupees 2,516, Annas 4, for the other, thus making an entire cost of Rupees 61,500 for earthwork.

* @ Four per yard.

35. Twelve bridges will be required as follows:—

| No. | | | RS. | A. | |
|---|---|---|---|---|---|
| 1 | 30 feet span. | 18 feet road-way. | 7,600 | 0 | Government House to Marine Villa. |
| 2 | Do. ... | Do. ...... | 7,650 | 0 | Road to Central Office. |
| 3 | Do. ... | Do. ...... | 7,660 | 0 | Road from Triplicane to the sea. |
| 4 | Do. ... | 15 feet road-way. | 6,800 | 0 | Agrarum street. |
| 5 | Do. ... | Do. ...... | 7,250 | 0 | Aroomootoo street. |
| 6 | Do. ... | 18 feet road-way. | 7,900 | 0 | Royapettah to Ice House. |
| 7 | Do. ... | Do. ...... | 7,620 | 0 | Edward Elliot's road. |
| 8 | Do. ... | Do. ...... | 7,660 | 0 | Barbers' bridge to sea. |
| 9 | Do. ... | 15 feet road-way. | 7,000 | 0 | Caranasvaren street. |
| 10 | Do. ... | 18 feet road-way. | 16,700 | 0 | Mylapoore Kacheri street. |
| 11 | Do. ... | 15 feet road-way. | 7,220 | 0 | Moothoogramnee street. |
| 12 | Do. ... | 18 feet road-way. | 8,750 | 0 | Road from Saint Thomé to Adayár. |
| | | @ Total cost of...... | 99,810 | 0 | for bridges. |

Three Syphons will be required as follows.

| No. | | RS. |
|---|---|---|
| 1 | One arch of 10 feet span... | 20,000 over Triplicane North Channel. |
| 2 | Do. | 20,000 over Triplicane South Channel. |
| 3 | Three arches of 10 feet span each................ | 24,300 over channel from Barbers' Bridge. |

Making a total of...... 64,300, for syphon,

or a total for mason work of Rupees 1,64,110, or a grand total for earthwork and masonry of Rupees 2,25,610.

Value of houses and lands.

36. To this sum, the value obtained from the Municipal Commissioners, of the houses which will have to be purchased (Rupees 6,800) and the ground required for the canal and "spoil" (Rupees 49,400) according to the Collector's valuation (which includes the value of the trees on the line) should be added, thus making the total estimated cost of the canal by this route Rupees 2,81,810, or somewhat under three *lacs* of Rupees.

Dimensions of bridge.

37. I should here remark that the dimensions of the bridges, referred to in paragraphs 11 and 35, are in accordance with instructions which I received from Colonel Lawford when Deputy Chief Engineer, in letter No. 9,216 of the 21st January, and are similar to the dimensions of the bridges on the Southern Canal and in my humble opinion, are quite sufficient for all the traffic which it will be necessary to accommodate.

38. In compliance, however, with a later order from the Central Office, I have prepared a set of estimates for bridges of two arches of 35 feet span each, amounting as follows:—

Bridges of two arches of 35 feet span.

| Number. | Roadway. | Locality. | Rs. |
|---|---|---|---|
| 1 | 18ft. | Government House to Marine Villa... ... ... ... ... | 16,300 |
| 2 | 18 | To Central Office ... ... ... ... ... ...... | 17,280 |
| 3 | 18 | From Triplicane to the sea... ... ... ... ... .... | 17,300 |
| 4 | 15 | Agrarum street ... ... ... ... ... ... | 15,920 |
| 5 | 15 | Arroomootoo street ... ... ... ... ... ... | 16,450 |
| 6 | 18 | Ice House road ... ... ... ... ... ... ... | 17,800 |
| 7 | 18 | Edward Elliot's road ... ... ... ... ... ... | 17,240 |
| 8 | 18 | Barbers' Bridge to the sea ... ... ... ... ... ... | 16,230 |
| 9 | 15 | Caranasvaren street. ... ... ... ... ... ... | 16,000 |
| 10 | 18 | Mylapoore Kacheri street ... ... ... ... ... ... | 22,140 |
| 11 | 15 | Moothoo Gramnee street ... ... ... ... ... ... | 15,820 |
| 12 | 18 | St. Thomé to Adayár ... ... ... ... ... ... ... | 17,400 |
| | | Total........... | 2,05,880 |

39. This sum, without including the value of the extra houses and ground required, exceeds the estimated sum for the smaller bridges by Rupees 1,06,070.

Increased costs of houses owing to the wider bridges.

40. I am sure the value of the houses would not be under the original amount, say 7,000, thus making the extra cost of these larger bridges Rupees 1,13,000 at least more than the smaller ones, or more than one-half of the entire original estimate for the canal, omitting the valuation of the ground.

Present boats not requiring such large bridges.

41. No boat on the canal is wider than 15 feet, and only very few are even so wide, and as the towing-paths are only 2 feet higher than the water surface, the loading of the boat, even with firewood, can always be so arranged as not to touch the sides of the towing paths or the arches.

Straightness of Canal rendering the large bridges still less necessary.

42. The general straightness of the proposed canal renders the large bridges less necessary, as the boatmen of one boat can always see another boat coming towards them in sufficient time to arrange not to meet exactly under the bridges.

Six feet depth of foundation reduced advisable by the likelihood of a great velocity in the canal.

43. Not having been able to obtain any satisfactory information regarding the rise and fall of the Adayár and Kúam Rivers, and fearing there might be a considerable velocity in the Junction Canal owing to the sudden rise of one river before the other, I have allowed in the estimates for 6 feet foundation on wells for all the bridges.

44. For some of the bridges, however, the ground may prove sufficiently firm not to require wells, but I think the scour of 12 feet under the 1st bridge on the Northern Canal shows the necessity for at least 6 feet foundation, and a good flooring with retaining walls.

Syphons.

45. The 1st and 2nd syphons over the Triplicane north and south drains will have each one arch of 10 feet span, which will I am sure be sufficient for all purposes.

46. The 3rd syphon over "Barbers' Bridge" channel is to have three arches, each of 10 feet span, which will be sufficient judging from the smallness of the water-way of the bridges and tunnels immediately above it.

Syphon for back-water south of Saint Thomé, not required.

47. I have not allowed for a syphon for the back-water south of Triplicane for the reasons alluded to in paragraph 29, &c., as the surplus water could with advantage be disposed of without being allowed to go direct to the sea.

48. I am aware 5 per cent. is the usual allowance for "sundries, &c." in mason works in this country, but as so many estimates have proved insufficient, not, perhaps, so much from the rates and quantities being too little, as from unexpected causes, as well as the superintendence being so much out of proportion with the cost of the actual work performed, that I have doubled this item in all the estimates for mason works, and I have allowed a "rate" which is a little in excess of the data which I have received from Officers connected with the public works of the Presidency as I am aware that the cost of all materials is steadily increasing.

Rates allowed are a little in excess of the current Madras rates.

49. In framing the estimates for the mason works I have not followed the usual form, as I always found it did not contain sufficient information for the construction of works, so as to enable the executive Officer to keep the cost within the allowance.

New form of estimates adopted, and reasons for doing so.

50. In the form which I have adopted, which is somewhat similar to that used in Ireland in the Public Works, the estimate begins with the first expense and follows in its course the work to its completion, so as to allow of comparison at any time, between the actual cost of the work and the amount allowed in the estimate.

51. Turfing for the sides of the canal, I have omitted altogether as being too costly; but in excavating the canal, I would propose to place a number of earthen pipes in the sides to take off the rain water, which is the chief cause of the destruction of the slopes.

Turfing omitted as being too costly.

52. I have also omitted any charge for fencing, as the spoil banks can be so placed, as for a time, to act as a fence quite as well as many of the fences of the fields through which the canal will pass, and fences can hereafter be made where necessary.

53. It is fortunate that not one irrigation channel is crossed by this entire line so that no syphons will be required for this purpose.

Irrigation syphons are not required.

54. The estimate, as before stated, allows for excavation to a depth of 4 feet below mean-tide, which was the depth fixed for the "High Level" Canal originally proposed.

Depth of 4 feet below mean-tide allowed in the estimate but not considered necessary.

55. It appears however to me that a depth of 3 feet would be ample, or even 2 feet 6 inches, considering that very many parts of the Northern and Southern Canals are under that depth, and that there are on the Indus many steamers and barges not drawing more than 2 feet.

56. I need hardly point out to you what a vast saving in expenditure there would be in adopting either of these depths.

57. The bridges might be built to allow of 4 feet hereafter, should such a depth be required.

58. In the section and estimate, arrangements have been made for allowing a "berm" or margin of 9 feet between the top of the excavation and the foot of the spoil bank.

59. This will act as a towing-path for the present, but I would recommend hereafter, a towing path being cut nearer to the water surface and on the same level as the towing-paths of the bridges, as there must be a great waste of power in drawing a boat from such a height and such a distance from the line or direction of the boat.

60. There are three places, namely, Tondavaroya Gramnee street, road to Saint Anthony's Chapel, and the avenue to the Sadath Begum's house where Ferry boats may be a convenience, but as care informing the spoil bank into a bandy road on the west side of the canal joining these three places may do away with the necessity for them, I have made no charge for them in the estimate.

Ferry boats not necessary.

61. I regret much in laying out this line not to have been able to avoid all the Native burial grounds, four of which come exactly in the centre of the proposed canal.

Canal crosses four Native burial grounds.

62. The 1st contains only two tombs which are in a cocoanut tope north of Agrarum street.

63. The 2nd and 3rd have only a few tombs and are on the south of the Ice House road and close to the north side of Edward Elliot's road respectively.

Burial ground belonging to late Nawab's family.

64. The 3rd is the one of the most importance belonging as it does to the family of the late Nawab. There are, however, in it only two tombs of consequence.

65. These I tried to avoid by going straight through St. Thomé but the value of the houses and gardens which would have to be purchased as well as the extra depth of cutting required showed too clearly that there was no other line but the one adopted, which would not cost an enormous sum.

66. A large quantity of the ground, included in the valuation, I am in hopes may not be required, as with slight additional expense, much of the spoil could be deposited in places which would be very much improved by being raised above the level of salt water and floods.

Comparison of Costs of the two lines.

67. In order to allow of a comparison between the two proposed lines for a Junction Canal I have taken out the quantity of earthwork from the section of the line proposed by Mr. Kennedy, and have allowed the same rates for it which I have for the coast line, and the result is shown in the comparative statement herewith forwarded, to be very much in favor in points of cost of the coast line.

(*b*) 1,16,24 yards.
(*c*) 9 360 „
(*a*) 2,264 „

68. The distance is somewhat more (*a*) from canal to canal by the coast line (*b*) than by the more direct route, (*c*) but the objection of having to keep the rivers clear is, to a great extent, common to both projects, and, I am sure, the interest on the difference in cost would far exceed the annual outlay required for this purpose.

69. On the direct route there are three bridges over the Kûam, the heights of the arches of which are somewhat under the heights determined on for the bridges over the canal.

Extra distance compensated for by the fact of that canal connecting Saint Thomé with Madras.

70. The extra distance by the coast line appears to me to be compensated for, to a very great degree, by the fact of *that* line connecting Saint Thomé with Madras.

Destruction of wells by the salt water in the inland line raised as an objection by natives.

71. One objection urged by the Natives against the inland line, namely the destruction of the wells by the introduction of a salt water canal, seems to me deserving of more weight than it appears to have yet received.

72. It may be said that the water of their wells is above the level of the salt water in the proposed canal, but when there are freshes in the rivers at each end and the water in the intervening canal becomes raised to an equal height (say 6 feet) then it appears likely, considering the porous nature of the soil, that the wells in the vicinity will be affected.

73. In the case of the coast line, however, almost all the wells near which it runs are "brackish," and many of them sunk below the level of the sea and the trees are irrigated by "brackish" water, so this objection cannot be raised in the case of the coast line.

74. I must now, in conclusion, express my regret at the length of time which this survey and report have occupied, but although the distance is short the work was most intricate and troublesome passing through, as it does, many guava and cocoanut topes.

75. I have received in the preparation of the estimates and survey considerable assistance from N. Murugasen Sub-Overseer, who only wants practice and a little more energy to make him a very useful member of the Department.

76. I now beg to return all the plans and records which were forwarded to me by Colonel Lawford referring to this subject.

5. The comparison of amounts in Clause I, paragraph 2, of the Chief Engineer's Proceedings is not correct inasmuch as the amount of the smaller bridge estimate, viz., Rupees 3,07,526 for the direct route has been compared with Mr. Kennedy's estimate Rupees 3,59,300 which was for the larger bridges.

| RS. |
|---|
| 74,880 |
| 20,000 |
| 94,880 |

6. In the original estimate for the High Level Canal above referred to, the valuation of lands and houses is put down by Mr. Kennedy at Rupees 74,880 and in his letter accompanying the estimate he says Rupees 20,000 more would be required if the canal were cut to the mean-tide level, hence I assumed the even amount of Rupees 1,00,000, as I observed Government remarked in one of the minutes upon this subject that Mr. Kennedy's valuation was not sufficient.

7. In the same original estimate a sum of Rupees 1,500 is entered for removal of houses, and I think an additional sum of Rupees 500 is not too much considering the extra depth of foundations &c., for the bridges for the mean-tide level.

8. In the original estimate no allusion was made to the carriage road, and therefore in my comparative estimate it is not referred to, and I think myself considering there is at present a very fine carriage road parallel with the line of canal, that it would be a pity to spend Rupees 45,000 upon another road.

9. In examining the abstract of Mr. Kennedy's estimate lately received I observe a charge of Rupees 10,000 for removal of spoil, but, to all intents and purposes, it may be considered as an additional charge for compensation and thus show my original charge of Rupees 1,00,000 to be correct.

| | |
|---|---|
| 71,631 | (B) |
| 72,787 | (C) |
| 1,156 | (A) |

10. The small (A) difference between the charge (B) for earthwork in my comparative estimate with that submitted by Mr. Kennedy (C) is I think equally satisfactory.

Marked (a b)

11. For the purpose of further comparison between the coast line and Mr. Kennedy's last estimate for the mean-tide level, I have prepared another abstract in which are included all items necessary to make the inland line similar to the coast line, and from which I have excluded other charges such as the Rupees 45,000 for the carriage road.

12. In the original estimate a charge was made for a bridge of 60 feet road-way for Mount Road, 40 feet road-way for Poodoopaukum and 30 feet for Meersaibpett and 5 others of various road-ways.

13. In my comparative estimate and the additional one now forwarded I have allowed for the respective road-ways of the first three, and an average of under 18 feet road-way for the other 5; besides I have converted the charge made in the original estimate for 4 Ferry boats into charges for bridges also of under 18 feet road-way for the reasons given in paragraph 3.

| |
|---|
| 4,36,975 |
| 4,35,135 |
| 1,840 |

14. By this arrangement there will be six more bridges required than have been allowed for by Mr. Kennedy, making at an average of Rupees 17,156 an increase of Rupees 1,02,936 or a total altogether of 4,36,975 or only Rupees 1,840 more than my rough comparative estimate.

15. I now beg to enclose the earth-work calculations, and should have sent them in before only that I had on the 20th of February forwarded a sheet of calculations to be made in the Central Office, and as I had not heard any thing more of it, I imagined that there was not time enough in the Central Office to make the calculations, and that to forward my calculations would be burdening my report with useless papers.

16. On the same occasion I furnished the necessary information to the Central Office fo the preparation of the bridge plans, but as I had heard nothing more of them I prepared a pencil plan of one bridge, and from it with certain alterations I extracted the quantities for the estimates.

17. I now enclose this plan and also one of a 3 arch syphon from which I prepared the estimates for the syphon. The masonry works are on the whole so very similar that separate plans will not be necessary until the work shall have been sanctioned.

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## JUNCTION CANAL.

*Abstract of estimate for direct route A. B.*

| | Rs. | Rs. |
|---|---|---|
| Excavating canal as per section supplied by Mr. Kennedy........ ......... | "72,787" | |
| " Removing spoil from excavation between Mount Road and Kúam"...... | "10,000" | |
| " Putting bank into section"........ | "6,300" | |
| " Protecting Groin at Adayár"........ | "1,842" | |
| " Planting trees and fencing"........... | "1,756" | |
| Sundries at 5 per cent...... | 4,634 | |
| Total........... | | 97,319 |
| " Under-tunnels for irrigation"........ | "6,172" | |
| " Constructing water-shoots for drainage"........ | "7,612" | |
| Sundries at 10 per cent...... | 1,378 | |
| Total...... | ......... | 15,152 |
| Bridges as estimated for by Mr. Dopping for the sake of comparison... ...... ... { 60 feet road-way 1............ | 36,700 | |
| 40 feet " 2............ | 27,700 | |
| 30 feet " 3............ | 23,200 | |
| Nine smaller bridges under 18 feet at an average of Rupees 17,156......... | 1,54,404 | |
| Total for bridges including sundries...... | ......... | 2,42,004 |
| " Compensation for lands," &c........ | "41,000" | |
| " To owners of compounds," &c. " say"........ | "20,000" | |
| " Compensation for Native houses," &c. " say"........ | "15,000" | |
| Total compensation...... | ......... | 76,000 |
| Clearing away buildings as shown in previous estimate, slightly increased to suit " mean-tide level."........ | 2,000 | |
| Total...... | ......... | 2,000 |
| Dredging Kúam........ | 4,500 | |
| Total...... | ......... | 4,500 |
| Grand total...... | ......... | 4,36,975 |

Four hundred and thirty-six thousand nine hundred and seventy-five.

(Signed) J. H. DOPPING,
*Civil Engineer.*

Saint Thomas' Mount,
*27th June* 1861.

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No. 54. ORDER THEREON, 5th November 1861, No. 2,046.

Ordered to lie over.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 55. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 1st November 1861, No. 6,762:—

SIR,

1. With reference to the Proceedings of Government, dated 25th October 1861, No. 34, I have the honor to submit for orders the accompanying letter from Mr. Maitland, Sub-Engineer, requesting permission to return to Combaconum for the purpose of making over, in a regular manner, the Range of which he was in charge in the Tanjore District, and which is at present held by Assistant Overseer Wylie on Mr. Maitland's responsibility.

1 Original letter, dated 28th October 1861.

2. As it is desirable that the transfer should be effected in accordance with the rules, particularly in a District like Tanjore where the works are so numerous, I have, in anticipation of the sanction of Government, directed Mr. Maitland to return forthwith to Combaconum for the purpose, and to join the Madras District as soon after as possible.

3. With regard to paragraph 3 of Mr. Maitland's letter forwarded herewith, I recommend that he shall be considered as on duty from the date he may leave the Presidency to return to Tanjore, and that travelling allowance be granted to him for the journey to and from Combaconum.

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No. 56. ORDER THEREON, 5th November 1861, No. 2,047.

1. The Chief Engineer's proceeding is approved; but Mr. Maitland will be directed to join Madras without delaying unnecessarily at Combaconum.

2. As recommended by the Chief Engineer Mr. Maitland will be considered on duty from the date of his quitting the Presidency on his way to Tanjore; and he will be allowed the prescribed travelling allowance for his journey to and from Combaconum, provided he rejoins Madras with expedition.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 57. Proceedings of the Madras Government, dated 5th November 1861, No. 2,048:—

1. Resolved that the attention of the Chief Engineer be drawn to the Order of Government, dated 8th May 1856, No. 667, regarding the restoration of the Nerinjepet Anicut.

2. The consideration of the project was deferred pending Mr. Fraser's investigation of the question of constructing Reservoirs for the better supply of the Cáveri, but though 5½ years have elapsed since the first order was passed, the Government are in ignorance of any thing having been actually done in the matter.

3. The Chief Engineer is requested to report immediately on the present state of the question as the Government are anxious that the subject should be considered at once, with reference especially to the storage of water for which there must be means available in the Upper Bhowani and the Moyár.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 58. Read the following letter from CHARLES SAUNDERS, Esq., Officiating Commissioner for the Government of the Territories of His Highness the Máhá Rájáh of Mysore, to T. PYCROFT, Esq., Chief Secretary to Government, Fort Saint George, dated Bangalore, 25th October 1861, No. 33:—

SIR,

1. I have the honor to acknowledge the receipt of Mr. Secretary Sim's letter of the 7th instant, No. 1,936, and in reply to state for the information of His Excellency the Governor in Council, that the necessary steps will be taken by the Mysore Government to carry out with the greatest practicable despatch, the required improvement of the main communication between Wainád and Mysore.

2. The subject had already received attention, prior to the receipt of the letter above referred to, and the requisite funds for the purpose of carrying out the road have been provided in the current year's Budget.

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No. 59. ORDER THEREON, 6th November 1861, No. 2,049.

Ordered to be communicated to the Board of Revenue with reference to the Order of Government in the Revenue Department, dated 7th October last, No. 1,935, and also to the Chief Engineer and the Collector of Malabar for information.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 60. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 24th October 1861, No. 6,334:—

SIR,

1. In the Proceedings of Government, dated 17th April 1861, No. 776, authority was granted for my disposing of all applications of leave of whatever description in India submitted by Non-Commissioned Officers and Soldiers in the Department of Public Works below the rank of Sub-Engineer, and I have now the honor to request that such may also be allowed in the case of Warrant Officers below the rank of Sub-Engineer.

2. I make this request as it appears to me unnecessary to have more than one rule to regulate the grant of leave to the Military Subordinates of all ranks of this Department.

3. The Circular referred to in paragraph 2 of the Proceedings of Government dated 12th August 1861, No. 1,532, is now under preparation, and as soon as I am favored with the orders of Government on this letter, it will be completed and forwarded to the several Members of the Public Works Department for information and guidance.

4. It is observed that the authority vested in the Chief Engineer, in the Fort Saint George Gazette of the 18th October 1861, page 549, applies only to Privilege Leave, whereas my present request has reference to leave of every description allowed by the rules in India to the Military Subordinates of this Department.

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No. 61. ORDER THEREON, 6th November 1861, No. 2,050.

Referred to the Military Department with reference to the Order in that Department, dated 28th March 1861, No. 1,168.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 62. Read the following Proceedings of the Madras Government in the Military Department, dated 5th November 1861, No. 3,983:—

| | |
|---|---|
| Communicating letter from the Adjutant General of the Army, stating that the services of Lieutenant G. J. F. Begbie, 35th Regiment Native Infantry, are available for employment in the Upper Godavery. | (Vide Military Proceedings, 5th November 1861, Nos. 114 @ 116.) |

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No. 63. ORDER THEREON, 6th November 1861, No. 2,051.

1. Communicated to the Chief Engineer.

2. Lieutenant Begbie should be ordered to join immediately.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 64. Read the following Proceedings of the Madras Government in the Educational Department, dated 29th October 1861, No. 43:—

| | |
|---|---|
| Requesting that the sum granted as contribution on account of the Vizagapatam Male and Female Orphan Asylums, may be defrayed from such source as may be determined in the Department Public Works. | (Vide Educational Proceedings, 29th October 1861, Nos. 49-50.) |

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No. 65. ORDER THEREON, 6th November 1861, No. 2,052.

Communicated to the Chief Engineer who is requested to issue instructions for the early commencement of the work. Colonel Horsley will state from what funds the Government contribution may be paid.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 66. Read the following Endorsement of the Chief Engineer, dated Chepauk, 14th October 1861, No. 5,855:—

Read the following letter from B. CUNLIFFE, Esq., Collector of Madras, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer Central Circle, dated Sydapet, 10th September 1861, No. 147.

SIR,

With reference to your Memorandum of the 20th June last, No. 1,779, communicating the Orders of Government of the 15th idem, No. 1,110, I have the honor to forward herewith a Statement showing the irrigable area and cultivation, with the assessment of the Sirkár and Inám lands, for the last 10 years, under the Komaraseralapakam and Kolattúr Hissa Tanks, in the Ponnéri Tank of this District.

*Statement showing the Ayacut and cultivation under the Hissa Tank of Komaraseralapakam and Kolattúr, in the Ponnéri Táluq of Madras District.*

| Ayacut. | | | | | | | | | Cultivation. | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sirkár. | | | | Inám. | | | | | Sirkár. | | | | | | | | | | Inám. | | | | | |
| Extent. | Assessment. | | | Extent. | Assessment. | | | Fasli. | Extent. | Assessment. | | | Remission. | | | Net assessment. | | | Extent. | Assessment. | | | Remarks. |
| | RS. | A. | P. | | RS. | A. | P. | | | RS. | A. | P. | RS. | A. | P. | RS. | A. | P. | | RS. | A. | P. | |
| 175 | 900 | 8 | 0 | 23 | 166 | 9 | 0 | 1,261 | 88 | 337 | 0 | 0 | ... | ... | ... | 337 | 0 | 0 | 18 | 66 | 0 | 0 | |
| | | | | | | | | 1,262 | 84 | 409 | 0 | 0 | ... | ... | ... | 409 | 0 | 0 | 18 | 103 | 0 | 0 | |
| | | | | | | | | 1,263 | 77 | 324 | 0 | 0 | ... | ... | ... | 324 | 0 | 0 | 18 | 86 | 0 | 0 | |
| | | | | | | | | 1,264 | 87 | 792 | 0 | 0 | ... | ... | ... | 792 | 0 | 0 | 19 | 186 | 0 | 0 | |
| | | | | | | | | 1,265 | 43 | 189 | 0 | 0 | 110 | 0 | 0 | 79 | 0 | 0 | 3 | 13 | 0 | 0 | |
| | | | | | | | | 1,266 | 96 | 413 | 0 | 0 | ... | ... | ... | 413 | 0 | 0 | 18 | 119 | 0 | 0 | |
| | | | | | | | | 1,267 | 89 | 580 | 0 | 0 | 45 | 0 | 0 | 535 | 0 | 0 | 10 | 63 | 0 | 0 | |
| | | | | | | | | 1,268 | 105 | 637 | 0 | 0 | ... | ... | ... | 637 | 0 | 0 | 19 | 131 | 0 | 0 | |
| | | | | | | | | 1,269 | 94 | 623 | 0 | 0 | ... | ... | ... | 623 | 0 | 0 | 20 | 133 | 0 | 0 | |
| | | | | | | | | 1,270 | 105 | 586 | 0 | 0 | ... | ... | ... | 586 | 0 | 0 | 18 | 107 | 0 | 0 | |

Madras District,
Collector's Office,
Sydapet, 10th September 1861.

(Signed) B. CUNLIFFE,
*Collector.*

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Submitted to Government with reference to their Proceedings, No. 1,110, dated 15th June 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 67. ORDER THEREON, 7th November 1861, No. 2,053.

| Faslis. | Cultivation. Assessment realized. RS. |
|---|---|
| 1261 | 337 |
| 1262 | 409 |
| 1263 | 324 |
| 1264 | 792 |
| 1265 | 79 |
| 1266 | 413 |
| 1267 | 535 |
| 1268 | 637 |
| 1269 | 623 |
| 1270 | 586 |

The Government observe scarcely any falling off in the revenue since the Comaraseralapakam Tank was breached, which seems to have occurred in Fasli 1265, according to the statement of the Chief Engineer in his letter of 8th June last, as compared with the previous years; and Colonel Horsley will explain whether under such circumstances the repair to the Tank are needed, and also why no increase in the revenue can be expected when the works proposed for the Tank are performed.

(Signed) J. D. SIM,
*Secretary to Government.*

*Proceedings of the Madras Government, Public Works Department,* 2291
*5th November* 1861.

*Memorandum on the mode of carrying out the Junction Canal between the Kúam and Adayár.*

1. The surveys of the coast line for the Junction Canal between the Kúam and Adayár having fallen to my consideration during Colonel Boileau's absence, I have taken the opportunity to investigate the whole subject, and though unwilling to add to the already voluminous correspondence, I would beg to be allowed to submit the following review of the proceedings in connection therewith up to this time, together with some suggestions as to the works which in my opinion should be undertaken.

2. The project seems to have been first pressed on the attention of Government by Colonel A. Cotton so far back as 1852, in connection with a scheme for supplying the city of Madras with water, and the main features of it worked out by Captain O'Connell, whose estimates submitted in the beginning of 1855, were subjected to the consideration of a Committee assembled for the purpose, but no further measures appear to have followed till the December following, when Captain Chambers, then Superintendent of the Eastern Coast Canal submitted two proposals, one for a Tidal-Canal passing from the Adayár parallel to the Mount Road, and entering the Kúam at about ¼ mile from the Commander-in-Chief's Bridge. The other for a high level fresh water canal to be fed from a Reservoir to be formed by the restoration of the Pommel Tank on the Adayár, in connection with the above-mentioned scheme of water supply.

*Vide* Printed Report Extract Minutes of Consultation, dated 2nd May 1855, No. 565.

3. In April 1856, detailed plans and estimates amounting to Rupees 1,68,900 exclusive of the value of land, were submitted by Captain Chambers for the second project, but it was entirely dependent on sanction being accorded to the construction of the Reservoirs, which were to have been of a capacity sufficient to ensure a daily surplus supply of 75,000 cubic yards. This canal was to have left the Kúam near the Commander-in-Chief's Bridge by a double Lock of 18 feet lift, and after traversing Nungumbaukum, to have been carried through the long tank to a point on the Mount Road half a mile south-west of the obelisk, where there would have been another double Lock to drop into the cut connecting it with the Adayár, near the house at present occupied by Sir A. Bittleston.

4. This canal would have been supplied and joined by the one proposed to have been led from the Pommel Tank to Madras, and the quantity conveyed by it was considered abundantly sufficient to supply the Lockage and evaporation from the Junction Canal.

5. This project was submitted for the sanction of Government in December 1856 with revised estimates amounting to Rupees 2,92,400, and at the same time the then Chief Engineer Colonel Faber, commented on three other methods by which it had been proposed to carry out this junction, viz. :—

(1.) By connecting the Adayár and Kúam by Saint Thomé and Triplicane.

(2.) By cutting completely through the long tank to the level of the proposed canal (3 feet below mean-tide.)

(3.) By a high level fresh water canal passing through the long tank and entering the Kúam considerably higher up, and avoiding the city altogether.

6. The first was rejected on the grounds of the great sacrifice of property it entailed, the interception of the drainage of several densely populated parts of the city, the risk of the canal becoming thereby an immense offensive sewer, and the heavy expense necessary to provide the requisite number of accommodation bridges.

7. The second plan involved a heavier outlay on excavation, and from the great depth would not only be costly in construction and maintenance, but highly inconvenient to the inhabitants.

8. The third necessitated a greater length of canal, two Dams and guard Locks to keep up a sufficient head of water, enlargement of the bridges, and a larger supply of water than the project submitted by Captain Chambers, which was accordingly the one recommended for sanction.

9. The Government directed this project to be submitted first for Colonel Arthur Cotton's opinion and report, and subsequently to the consideration of the Committee appointed to investigate the project of water supply to Madras with which it was intimately connected. The project was also reported on by Colonels Lawford and Collyer, and their recommendations were for the construction of the high level fresh water canal mentioned above as the third alternative.

10. This Committee however resolved to recommend a line afterwards suggested by Colonel A. Cotton, and surveyed by Mr. Kennedy, which leaves the Adayár at Pugh's Gardens, opposite to the southern canal, and enters the Kúam behind Messrs. Richardson's premises, traversing in its course mostly cultivated land, and interfering very little with private property and buildings.

11. The Government accordingly adopted the Committee's views and sanctioned Mr. Kennedy's estimates amounting to Rupees 3,59,000 for a salt water canal whose bed was to be 3 feet below mean-tide, and bottom width 65 feet.

12. Orders were then issued in May 1860, for the sum of Rupees 1,50,000 to be placed at Mr. Kennedy's disposal for the commencement of the work, and the Collector instructed to take the necessary measures for the acquisition of the requisite land. Immediately afterwards however in June, counter orders were issued to stop the work which had been already commenced, and the Chief Engineer was directed to report on the merits of a suggestion which had been made to take the Junction Canal on a line nearer the sea. The Chief Engineer's reply was adverse to the suggestion, and showed that the line originally sanctioned by Government was every way preferable, but the Governor in Council was not satisfied with the reply, and "was of opinion "that before a final decision was made a more detailed examination of the coast line should be "made by some one who had not already committed himself to the approval of one or other of "the proposed plans" and directed that "a competent Officer should be appointed to the duty." No Officer appears to have been available for the duty till December 1860, and the detailed plans, which are still in an unfinished state, reached the Central Office finally on 28th June last. This survey only confirms the opinions which have all along been expressed by the several Officers and Committees to whom the subject has been referred since 1855, and shows that the grounds on which the coast line was rejected were well founded.

13. The recommendation of the Committee for the adoption of the low level line estimated for by Mr. Kennedy, appears to have been based on its independence of the restoration of the Pommel Tank; the construction of which appears to have been considered only with reference to the scheme of water supply to Madras.

14. As respects the benefits to be conferred by the two plans, there can be no possible room for doubt as to the superiority of a fresh water canal running on a high level through the heart of a populous city, where the want of fresh water is so much felt. The late order of Government desiring the preparation of an estimate for the restoration of that tank on other grounds and the extended powers accorded to the Local Government for the sanction of works renders it highly desirable that the original proposal for the high level fresh water canal should be again entertained, for as I shall show, its cost will be considerably reduced.

15. In the first place the line to be followed is undoubtedly that surveyed by Mr. Kennedy commencing at Pugh's Garden at the Adayár, and entering the Kúam behind Messrs. Richardson's premises. Instead of excavating a deep canal, I would recommend the surface of the water being kept at 11½ feet above mean-tide with a depth of 4′ 6″ throughout.

16. The amount of excavation thus furnished will more than suffice for the embankments. A Lock with a single lift will be required at either end, and the one near the Kúam should be *above* the Mount Road so as to allow of the bridge being built on the tail walls, and so obviate the necessity for any great rise in the arch, and admit of its being made the whole

width of the road at a moderate expense. The same may be done at the other end for the Adayár Road, and the bridges six in number proposed by Mr. Kennedy will thus be sufficient, as with the water at this high level, iron Ferry boats, would answer at the bye roads:—

| | RS. |
|---|---|
| With this arrangement the excavation will cost only | 25,000 |
| Bridges | 70,000 |
| Two Locks | 50,000 |
| Platforms, &c. | 5,000 |
| Six boats at Rupees 600 | 3,600 |
| Aqueduct over the Adayár | 10,000 |
| Superintendence, &c. | 15,000 |
| Compensation | 50,000 |
| Total...... | 2,28,600 |

17. The last item would be diminished by the amount of excavation being so small, as little more than one-half the space would be required for the deposit of the earth. While at the same time the surface width of the canal instead of being only 20, can be extended to 30 yards.

18. The estimate for restoring the Pommel Tank so as to enable it to store 127 millions of cubic yards, and furnish the surplus supply daily of 75,000 cubic yards contemplated by Captain O'Connell was for:—

| | |
|---|---|
| Earthwork | 16,200 |
| Calingulah | 86,713 |
| Sluice | 7,143 |
| Total...... | 1,10,056 |

19. This however provided for the construction of a Calingulah 300 yards long and 13 feet high in a breach which the river had made through the old bund, but which is not in my opinion the right site. If made at the side of the tank near the hill it could perhaps be a flush work, and probably not cost more than one-fifth of the above sum. The channel from the tank might, as is now proposed, be carried past Guindi and over the Adayár by a small iron Aqueduct of a square yard or less in section which might be supported in small pillars, or on a single row of piles similar to the way in which the foot-path is attached to the Wallajah Bridge.

20. The restoration of the Pommel Tank having been taken up on other grounds, the estimate for it need have no connection with the Junction Canal; the Aqueduct to supply the latter being the only work necessary to extend the use of the water of the Reservoir to lands north of the Adayár.

21. The extension of the navigation to the Mount and by the Reservoir itself to 20 miles from Madras is another project, and may be considered separately.

22. The subject immediately to be decided being the cheapest and most useful method of carrying out the Junction Canal.

23. The advantages resulting from this canal have been so oftenstated that it will not be necessary for me to do more than briefly summarize them:—

(1.) The fundamental point of an ample supply of *fresh* water for drinking purposes.

(2.) The foundation for a system of water supply to the city for domestic purposes and for cleansing the Drains.

(3.) The Rivers Adayár and Kúam being kept full of fresh water all the year round.

(4.) All the cultivated lands and compounds of Madras could be supplied to a certain extent with water during the dry season.

(5.) A line of Navigation through the heart of Madras, extending eventually to the Mount and Palaveram, and connecting the North and South Canals, and thus admitting all the traffic to every part of the city thereby clearing the roads of traffic greatly, saving their wear and tear and consequently diminishing the expense of their maintenance.

(6.) Stone could be brought to all parts of Madras at ¼th of its present cost, a matter of considerable importance especially with reference to the improvements of the port.

(7.) A supply of water power equivalent to 300 horses for driving Punkahs or other purposes. The expense of a Steam Horse Power in Madras being about 2 Rupees per day, a charge of 8 Annas might be made on all water supplied for that purpose.

24. The water raised for irrigation in Madras is calculated to cost from 300 to 500 yards per Rupee. If that charge be reduced one-half, and 30,000 cubic yards be supplied daily for cultivation purposes, a revenue of 30 Rupees per day or say 10,000* Rupees a year would result.

25. The return from passengers, of whom there must be at least 10,000 a day travelling between the Adayár and the northern end of Black Town on an average three miles would yield with a toll at ½ Pie per head :—

| | | RS. | | RS. |
|---|---|---|---|---|
| | | | | * 10,000 |
| | 1,250, say........................... | 28,500 | ........... | 28,500 |
| * The quantity by the Northern Canal alone is 1,76,000 tons. | * 2,00,000, tons of goods per annum at ½ Pie per mile for 6 miles or say... | 3,000 | ........... | 3,000 |
| | | | | 41,500 |

26. At a moderate calculation the returns from this work would yield 20 per cent. on the outlay and it is unquestionably one of the first importance, providing as it does for the most pressing wants of a city containing 7,00,000 inhabitants or a population greater than that contained in the whole Delta of the Kistna, and hence also a return for the outlay may be the more speedily realized as for every 100 persons travelling on the canals in that Delta than will be certainly 1,000 on a canal passing through a densely crowded city.

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From J. H. DOPPING, Esq., Civil Engineer, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Moubray's Road, 27th June 1861, No. 61.

SIR,

1. I have the honor to acknowledge the receipt of an Extract from the Proceedings of the Chief Engineer, No. 1,852, of the 22nd instant, and now forward the information therein requested.

Original report upon coast line, No. 57 of the 7th June 1861.
Letter from Mr. Kennedy, dated 19th March 1861, and copy of abstract of estimate for Junction Canal.
Earthwork calculation for coast line and abstract.
Do. rough for inland line.
Valuation of lands required.
Valuation of houses.
Letter No. 170, from Superintendent East Coast Canal to Chief Engineer, September 1857.
Earthwork of bridges of coast line.
Abstract of estimate of coast line.
Comparative statements of coast and inland line estimates.
Abstract of estimate for inland line extracted from Mr. Kennedy's estimate of 1859.

2 Plans.

2. Mr. Kennedy's letter of the 19th March 1861 and his estimate, dated 22nd December 1859, I had never before been furnished with, nor was I even aware of their existence until the receipt of the Proceeding now under acknowledgment.

3. My abstract estimate (made merely for comparison) was framed from information contained in an estimate prepared in September 1857, by Mr. Kennedy for the High Level Canal (*vide* letter No. 170, from Superintendent of the East Coast Canal to Chief Engineer, dated 7th September 1857) but the earthwork was extracted from a section also prepared by Mr. Kennedy for the same route but for a canal with a water surface = mean-tide.

4. By a reference to this estimate you will observe I have adopted bridges of the same road-way as allowed by Mr. Kennedy, but the number is different inasmuch as Mr. Kennedy had arranged for four Ferry boats (which might have answered for a High Level Canal but certainly not where there would have been 13 or 14 feet of cutting) and for these four Ferry boats I have substituted four bridges

No. 68.

Read the following:—

No. 5,808.

*List of Bills received from the District Engineer Coimbatore, and submitted for the sanction of Government, which exceed their respective estimates by more than 5 per cent.*

| Audit No. | Date of Bill. | Description of work. | Amount of estimate. RS. | A. | P. | Amount of Bill. RS. | A. | P. | Excess. RS. | A. | P. | Percentage of excess. | To what year's expenditure appertains. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1860 | | | | | | | | | | | | | |
| 89 | July 31 | Repairing station roads at Ootacamund, amount of annual allowance sanctioned by Government on the 29th January 1857, No. 227……… | 3,600 | 0 | 0 | 3,911 | 11 | 9 | 311 | 11 | 9 | 8 | 1859-60 | The excess is owing to the damages sustained by these roads during eleven days of incessant rain in the month of November 1859. The annual grants for these roads should not have been exceeded without sanction. See paragraph 70, Chapter V of the new Code, which rule was in force previous to the promulgation of that Chapter of the Code. |
| 90 | Do. | Repairing road from Ootacamund by Kaity Ghát, and Arvencaud to Kalur bridge amount of do. do… | 1,400 | 0 | 0 | 1,533 | 3 | 5 | 133 | 3 | 5 | 9 | Do. | |
| 48 | Sept. 8 | Repairing from Coimbatore to Ambravutty river viâ Palachee, amount of do. do……… | …… | … | … | 921 | 1 | 8 | … | … | … | …… | Do. | The District Engineer reports being unable to furnish any satisfactory explanation of the cause of excess in the expenditure on these roads in the absence of any records. Captain Goddard, however, makes the following general observation: "With reference to the excessive expenditure on "roads it seems from the reports of all the Officers, that the "occasion of Sir Charles Trevelyan's visit was the origin "thereof. The District Engineer (Mr. Fraser) gave verbal, "orders to Officers to make a smooth surface, to ease slopes "&c., without reference to the consequences of the unau-"thorized expenditure he was making." |
| 49 | May 1 | Repairing from do. to do. viâ Palachee and Oodamalacottah, amount of do. do……… | …… | … | … | 2,682 | 8 | 4 | | | | | | |
| | | | 2,500 | 0 | 0 | 3,603 | 10 | 0 | 1,103 | 10 | 0 | 44 | Do. | |
| | | Total…… | | | | 9,048 | 9 | 2 | | | | | | |

The notice of the irregularity of exceeding the maintenance grants, in the case of the two other roads above referred to, applies equally to this road.

Central Office of Public Works,
Chepauk,
11th October 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

No. 69. ORDER THEREON, 7th November 1861, No. 2,054.

1. The Government sanction bills, Nos. 89 and 90. The Chief Engineer has properly noticed the irregularity of the District Engineer in permitting the execution of repairs beyond his competency to authorize.

2. With regard to bills Nos. 48 and 49 the Chief Engineer will at once call upon Mr. Fraser for a more detailed explanation of the irregularity on his part in incurring an expenditure of nearly 45 per cent. in excess of the estimate. It will be observed that the sanction of Government, dated 29th January 1857, No. 227, which includes the works under reference was for enhanced allowances; and for the District Engineer, of his own authority, to exceed this so largely was highly improper.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 70. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 19th October 1861, No. 6,120:—

SIR,

1. I have the honor to forward an estimate for Rupees 385 for fixing partitions in the upper story of the Dewán Khána to provide for the additional accommodation required for the Consulting Engineer for Railways and his Department, and request that sanction may be given for the work being performed from the general funds at the District Engineer's disposal. The accompanying tracing shows the proposed distribution of the available accommodation.

1 Letter from the District Engineer Presidency, No. 1,156, dated 2nd October 1861.
1 Plan.
1 Estimate.
1 Specification.

2. The existing partitions will be made use of to divide off the space allotted to each of the officers of this Department as originally intended.

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No. 71. ORDER THEREON, 7th November 1861, No. 2,055.

1. The estimate amounting to Rupees (385) three hundred and eighty-five, is sanctioned.

2. The Chief Engineer is requested to state whether room can also be found in the Dewán Khána for the accommodation of the Consulting Engineer of the Irrigation and Canal Company.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 72. Read the following Proceedings of the Board of Revenue, dated 17th October 1861, No. 5,704.

Read the following letter from J. SILVER, Esq., Collector of Tinnevelly, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Chepauk, dated Chockumputty, 21st September 1861, No. 406:—

SIR,

As I have not been furnished with a copy of the new Code of Public Works, and as a copy is much required in my Office, I have the honor to request you will be good enough to cause the same to be forwarded to me as soon as possible.

1. Submitted for the orders of Government.

2. The Board are aware that the new Code for Public Works is not yet complete, but as several Chapters of it have been printed and are it is believed in general use in the Provinces, they would recommend that if a sufficient number of copies be available, the Collectors be supplied with the portions in use, and that two copies be also forwarded to the Board's Office

(A true Copy and Extract.)

(Signed) W. HUDLESTON, *Secretary.*

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No. 73. ORDER THEREON, 7th November 1861, No. 2,056.

As the Board remark, the new Code is not complete, and its progress is stopped pending the contemplated re-constitution of the Public Works Department; the Chief Engineer will however furnish to the Board of Revenue and to the Collectors if possible, copies of such portions of the Code as have been already circulated to the District Engineers and are now in use.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 74. Read the following Proceedings of the Madras Government in the Educational Department, dated 1st November 1861, No. 45:—

Requiring the Chief Engineer to report the number of Apprentices for whom place can conveniently be found in the Workshop at Dowlaishwaram. } (Vide Educational Proceedings, 1st November 1861, Nos. 1-2.)

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No. 75. ORDER THEREON, 7th November 1861, No. 2,057.

Ordered to be communicated to the Chief Engineer, who is requested to submit the report called for in paragraph 5 of the Proceedings.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 76. Read the following letter from Lieutenant-Colonel C. DAVIDSON, C.B., Resident at Hyderabad, to J. D. SIM, Esq., Secretary to Government, dated Hyderabad Residency, 2nd November 1861, No. 1,703:—

SIR,

No. 1,946, dated 22nd October 1861.

With reference to your letter as per margin, and in continuation of mine of the 22nd ultimo, No. 1,640, I have the honor to enclose two Akkams, received from the Minister, directing the transfer of the lands required within the limits of the Hyderabad territory for the Madras Irrigation and Canal Company.

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MY KIND FRIEND,

From the letter of the Madras Government, which was enclosed in the letter illustrious gentleman Bahadoor (may his kindness ever endure), it has been known that certain pieces of land hereinafter specified are required for excavation of channel, &c. It is therefore written that you shall deliver up the land to the extent of 563 beegas to the Officers of the said Circar (*i. e.*

Madras Government) according to the following detail and bring the same to the notice of this Circar, and that orders are herein enclosed to the name of Rájá Ram Bhopal Bahadoor the Officer in charge of Gudval.

Land of the Circar.—From the District of Railum Pad ($324\frac{1}{2}$ beegas) three hundred twenty-four and half beegas.

From the District of Sooltanpoor ($169\frac{1}{2}$ beegas) one hundred sixty-nine and half beegas.

Land of the Gudval Samusthan.—From the District of Rajaloo ( 69 beegas) sixty-nine beegas.

Total beegas... 563 five hundred & sixty-three beegas.

(On the Envelope.)

*To the kind friend Roostoomjee,*

Concerning the delivery of five hundred and sixty-three beegas of land to the Officers of the Circar of Madras Government and to inform the same to this Circar.

| Mookhtar-ool-Moolk. |
|---|

26th of Rabee-oossanee in the Higeree year 1278. Corresponding with 31st October 1861.

(Signed) SYED MOHUMMED ZAKIR,
*Translator to Government Office.*

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*To the Rájá of high rank and dignity,*

From the letter of the Government of Madras which was enclosed in the letter of the illustrious gentleman Bahadoor (may his kindness be perpetuated) it is known that certain pieces of land to the extent of 69 beegas from the District of Rajaloo, attached to Gudval Samusthanum, are required for the excavation of channel, &c. It is therefore written that you shall deliver up the land above alluded to in charge of the Officers of the said Circar (the Government of Madras) and inform the same to this Circar. What shall be written more.

(On the Envelope.)

*To the Rájá of high rank and dignity,*

*Rájá Ram Bhopal Bahadoor.*

Concerning the delivery of sixty beegas of land from the District of Rajaloo attached to the Gudval Samusthanum to the Officers of Madras Government for excavation of channel, &c.

| Mokhtar-ool-Moolk. |
|---|

26th of Rabee-oossanee in the Higeree year 1278. Corresponding with the 31st October 1861.

(Signed) SYED MOHUMMED ZAKIR,
*Translator Government Office.*

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No. 77. ORDER THEREON, 7th November 1861, No. 2,058.

1. Ordered that the enclosures of the above letter with copies of their translations be forwarded to the Acting Collector of Kurnool, with instructions to have the former delivered to the addressees and the lands therein alluded to taken charge of by some competent officer on behalf of

his Government. The land will then be made over to the Chief Engineer of the Irrigation and Canal Company. Copies of the papers noted in the margin, relating to the lands in question will be furnished to Mr. Minchin, and he will place himself in communication with Colonel Cotton for any further information he may require.

Proceedings, 30th August 1861, Nos. 451 & 452.
Do. 18th September „ „ 178 & 179.

2. A copy of this order will be furnished to the Consulting Engineer of the Irrigation and Canal Company for his information with reference to his letters* noted in the margin.

* Dated 17th August 1861, No. 20.
Do. 2nd September „ „ 23.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 78. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th October 1861, No. 6,625:—

SIR,

1. I have the honor to forward for submission to Government, an estimate amounting, after correction, to Rupees 3,410 for re-constructing and repairing portions, viz., 6th, 7th, 8th, and 9th miles of the road between Salem and Trichinopoly, in the District of Salem, damaged by the heavy rain on the night of the 24th June last, as already reported to Government,—*Vide* Endorsement, No. 2,304, dated 3rd July 1861.

2 Letters from District Engineer, Nos. 107 and 142, dated 30th August and 7th October 1861.
1 Abstract estimate, Rupees 3,410.

2. Provision is made in the present estimate for repairing the damage, and also for preventing the recurrence of such an accident by raising the road and improving the drainage which was previously very defective.

3. The District Engineer commenced the work on emergency, and up to the 30th August 1861 an expenditure of Rupees 416 had been incurred. Since then, the Progress Report for September shows a further outlay of Rupees 339-4-6, making a total expenditure of Rupees 755-12-6.

4. The estimate has been examined and corrected in this Office, the rates given therein are those at present obtaining in the Salem District, and are sufficient to carry out the work. That for metalling is very high, viz., 12 Annas per cubic yard, the excess over the previous rate being on account of cartage, which will cost more than the District Engineer expected when he prepared the former estimate.

5. As it is essential that this road should be put in a thorough state of repair as soon as possible, I request Government will be pleased to sanction the estimate for immediate execution, the amount, Rupees (3,410) three thousand four hundred and ten, to be defrayed for the present from the general funds placed at the disposal of the District Engineer of Salem, for expenditure during the current official year. Should the allotment of that District prove inadequate to bear this charge, arrangements will be hereafter made for transferring funds from other Districts.

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No. 79. ORDER THEREON, 8th November 1861, No. 2,059.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 80. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th October 1861, No. 6,069:—

SIR,

1 Proceedings of Revenue Board, No. 4,678, dated 28th August 1861.
1 Specification, 3-7,276-1861.
1 Plan, 6-7,276-1861.
1 Abstract Estimate.

* Rupees 970.

1. With reference to the Proceedings of Government, No. 640, dated 28th March 1861, calling upon the Board of Revenue to report what work has to be done in a Salt Kacheri to require so much accommodation as that provided for in the plan and estimate* submitted with my letter, No. 11,036, dated 16th idem, and also for their opinion as to the form of the building then proposed for a Salt Kacheri at Tuticorin, in the District of Tinnevelly, I have the honor to forward, for submission to Government, the accompanying revised plan and estimate amounting to Rupees (600) six hundred, received through the Board of Revenue, with their Proceedings, No. 4,678, dated 28th August 1861.

2. The present estimate provides for the erection of a room 16 feet long by 10 broad, with a back and front Verandah 6 feet wide to protect the main walls from the effects of sun and rain. While the Board consider the accommodation not more than sufficient for the purposes of a Salt Kacheri and recommend the estimate for sanction, they suggest that the space now devoted to a back Verandah, which is not accessible from the interior of the building, might be made to serve some more useful purpose; and accordingly the District Engineer has been requested to report on the subject in communication with the Collector, which report will be submitted to Government immediately on receipt.

† No. 341, dated 31st July 1861.

3. The estimate has been examined and corrected in this Office. As the Collector solicits† early sanction to it, I beg that Government will be pleased to accede to his request, the amount, Rupees (600) six hundred, to be defrayed from the general funds placed at the disposal of the District Engineer for expenditure during the current official year.

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No. 81. ORDER THEREON, 8th November 1861, No. 2,060.

The revised estimate of 600 Rupees, submitted with this letter, for a Salt Kacheri at Tuticorin in Tinnevelly, is sanctioned; the money being defrayed, as recommended, from the general funds at the disposal of the District Engineer in the current year.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 82. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 17th October 1861, No. 6,028:—

SIR,

2 Letters from District Engineer Malabar, Nos. 103 and 152, dated 3rd August and 18th September 1861.
1 Abstract estimate 2-5,804-1861.
1 Specification 1-6,734-1861.

1. In their Proceedings, No. 561, 16th March 1860, Government sanctioned an estimate amounting to Rupees 10,190 for the repair of the Yennamakal Dam, in the District of Malabar, and the actual expenditure incurred thereon up to the 1st May 1861, amounted to Rupees 6,228-6-2, leaving a balance of Rupees 3,961-9-10 unexpended.

* No. 103, dated 3rd August 1861.

2. The District Engineer however now forwards* an estimate amounting to Rupees 5,960, which has met with the Collector's approval and is considered absolutely necessary for the completion of the repairs.

3. Great difficulties, the District Engineer reports, were experienced in the execution of the repairs last year, the bunds thrown across the back-waters having been twice breached by the wind and tides.

4. The amount allotted for irrigation repairs in the current Budget is Rupees 6,100, in which is included the balance of the Yennamakal Dam estimate sanctioned in March 1860. The ordinary annual repairs average Rupees 1,100, leaving a sum of Rupees 5,000 available for the repair of the Yennamakal Dam, Rupees 960 must therefore be provided from some other source and the only one the District Engineer can suggest is the sum of Rupees 6,000 entered in the Budget for " Roads not provided with special grants," I have the honor therefore to solicit the early sanction of Government to the estimate now forwarded, and to the provision of funds as above proposed.

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No. 83. ORDER THEREON, 8th November 1861, No. 2,061.

Under the circumstances stated, and agreeably to the recommendation of the Chief Engineer, the Government grant authority for defraying 960 Rupees, the balance calculated to be required for the repair of the Yennamakal Dam in Malabar, from the sum of 6,000 Rupees entered in the Budget for roads not provided with special grants in that District.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 84. Read the following Endorsement of the Chief Engineer, dated Chepauk, 21st October 1861, No. 6,189.

Read the following letter from Major J. F. STODDARD, Acting District Engineer, Godavery District, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Dowlaishwaram, 28th September 1861, No. 771 :—

SIR,

1. With reference to your letter, No. 4,356, dated 27th ultimo, I have the honor to forward an estimate of the probable cost of the articles, &c., required to complete the Steamer " Prince" amounting to Rupees 2,455-8-0, and to state that all the articles can be made at the Government Workshop, with the exception of the following :—

2 Anchors.
1 Kedge.
1 Chain.
6 Ash Oars.
6 Engine room lanterns.
2 Paddle-box lanterns, but which Mr. Moncrieff believes he can obtain from private merchants at Cocanada or Madras.

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Submitted to Government with reference to Proceedings, No. 1,586, dated 20th August 1861, with the recommendation that such of the articles, estimated at Rupees 2,455-8-0 as cannot be made up at the Workshops, may be procured from the local markets as proposed, the money to be provided from the general funds of the District but debited eventually to the vessel.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

No. 85. ORDER THEREON, 8th November 1861, No. 2,062.

1. The Chief Engineer's suggestions are approved; and sanction is granted for the sum of Rupees (2,455) two thousand four hundred and fifty-five.

* Chief Engineer's letter, 7th March 1861, No. 10,699.

† Despatch, 16th July, paragraphs 2 and 3 in G. O. 20th August 1861, No. 1,586.

2. The estimate submitted does not include several of the articles which appeared in the former list;* the articles so excluded, it is presumed, are to be dispensed with. It is observed that no provision is made in the estimate for screws for the decks, which it was arranged by the Secretary of State† should be made at Dowlaishwaram.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 86. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 25th October 1861, No. 6,388 :—

SIR,

2 letters from District Engineer Tinnevelly.
* *Vice* appavoo Pillai dismissed.

1. I have the honor to report for the information of Government that the District Engineer Tinnevelly, in his letter, No. 216, dated 20th March 1861, having recommended the temporary* employment for six months of one Gnanapragasem Pillai as a Sub-Overseer, 2nd Class, 3rd Grade, on the grounds that his good character, his general intelligence, his knowledge of accounts and his experience as a Gumáshta and Maistry on the Cotton roads from 53 to 56, and subsequently as a temporary Sub-Overseer fully qualified him for employment in that capacity, his entertainment was sanctioned in the Proceedings of this Office, No. 11,692, dated 6th April 1861, under the authority conveyed in the Proceedings of Government, No. 1,352, dated 13th September 1860.

No. 154, dated 9th October 1861.

2. The temporary Sub-Overseer entered upon his duties on the 20th April last, and as the period for which his employment was authorized, expired on the 19th ultimo, the District Engineer in his letter as per margin requests that orders may be issued for the continuance of his services.

3. Considering that Gnanapragasem Pillai has afforded great satisfaction in the discharge of his duties; that his conduct during the past six months has been exemplary, and that he is looked upon by his immediate superior, Lieutenant Makgill, as an acquisition to the Department, I beg to recommend that the District Engineer's proposition may be complied with.

4. In conclusion, I would beg to refer to paragraph 3 of my letter No. 5,994, dated 16th instant, wherein Government were informed that there were no passed Candidates available to fill permanently the post in which temporary Sub-Overseer Mylarumperumal Pillai is now officiating, and this remark applies equally to the case of Gnanapragasem Pillai.

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No. 87. ORDER THEREON, 8th November 1861, No. 2,063.

As there is no passed Candidate available, the Government sanction the continued employment of Gnanapragasem Pillai as a Sub-Overseer of the 2nd Class, 3rd Grade, in Tinnevelly, for 12 months longer, provided a passed Candidate is not intermediately available.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 88. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 26th October 1861, No. 6,469 :—

SIR,

I have the honor to forward the accompanying plan and estimate, amounting in aggregate to Rupees 600, for repairs to the Chuttrum at Hospett, in the Bellary District, and the addition of a Verandah in order to render it available for a Tahsíldár's Kacheri, which is much required. The District Engineer has lately forwarded a design for a Táluq Kacheri, but he represents that even if that were sanctioned it could not be constructed under two years' time, and that in the meanwhile the Chuttrum will be required to serve the purpose. As the Collector supports the District Engineer's proposals and the Board of Revenue likewise approve of it, I beg that sanction may be given for carrying out the work at once from the general funds of the District.

1 Letter from the District Engineer Bellary, No. 180, dated 3rd August 1861.
1 Copy of letter from the Collector of Bellary, No. 214, dated 31st July 1861.
1 Proceedings of the Board of Revenue, No. 4,870, dated 9th September 1861.
1 Plan.

| | RS. |
|---|---|
| 1 Abstract Estimate | 410 |
| 1 Do. do. | 190 |

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No. 89. ORDER THEREON, 8th November 1861, No. 2,064.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 90. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India, (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 2nd August 1861, No. 35:—

SIR,

1. In acknowledging receipt of your letter No. 55, of 14th June last, relative to the proposed Landing Pier at Sedaseaghur, I must, in the first place, remark on the absence of any explanatory map or plan. It is, indeed, intimated that a sketch map shall be sent hereafter, but in the mean time the papers transmitted, particularly the letters from the Chief and District Engineers, are to a great extent, unintelligible without it. I may take this opportunity to mention that there is evidently some misapprehension as to the sort of illustrative sketches by which it is my wish that your letters in this Department should be accompanied. In paragraph 5 of my Despatch, No. 16 of 4th August 1859, I observed that "a very slight sketch, or even a "pen and ink diagram on the face of the sheet, would commonly suffice;" and it would have done perfectly in the present instance. A few outlines showing the general form of the bay or harbour, together with the proposed site, length and direction of the Pier, would have answered every purpose.

2. With reference to the proper subject of the letter under reply, I need add little to the well merited rebuke passed by you on the Chief Engineer, for the negligence and want of method observable in his official arrangements. I apprehend, however, that the non-existence of any plan, and consequently of any trustworthy estimate for the Pier, thirteen months after its construction had been sanctioned, is by no means a solitary instance of inattention to the standing orders of the department. It is contrary to all rule that a project should be entered in the Budget without previous submission of plans and estimates; but, in this case, not only had no plan been prepared, but even the question of sites had not been finally settled, at a time when, according to instructions issued more than a year before, every thing ought to have been in readiness for the commencement of the work.

3. With regard to your President's observations on the Breakwater, which, it has been suggested may hereafter be required at Sedaseaghur, my letter of 16th August last informed you that in my opinion the work ought to be deferred until the capabilities of the harbour shall have been tested by experience and shall have attracted to the place some considerable amount of trade.

No. 91. ORDER THEREON, 8th November 1861, No. 2,065.

The directions contained in paragraph 1, will be duly attended to in future.

(Signed) J. D. SIM,
*Secretary to Government.*

Ordered that the following letter be despatched :—

No. 92. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the British Resident of Travancore and Cochin, dated 8th November 1861, No. 2,066.

SIR,

I have the honor under the orders of the Governor in Council, to forward herewith for presentation to His Highness the Raják of Cochin, copy of a Report (in four Volumes) on the Ganges Canal, with plans, &c., by Sir Proby T. Cautley.

No. 93. Read the following letter from the Honorable WILLIAM THOMAS GIBSON, Esq., Colonial Secretary, Ceylon, to T. PYCROFT, Esq., Chief Secretary to Government, Fort Saint George, dated Colombo, 21st October 1861, No. 78 :—

SIR,

1. Having laid before the Governor your letter, No. 1,513 of the 9th of August last, stating, for reasons set forth therein at length, that, so far from being called on to re-imburse this Government the expenses incurred by it for the repair of the Paumben Steam Dredge, as promised in your letter of 22nd of November 1860, the Government of Madras has an equitable claim on that of Ceylon for the sum of Rupees 2,400 necessary to restore the Dredge for employment on the Paumben works, I am directed to acquaint you, for the information of the Honorable the Governor of Madras in Council, that this Government will not resist the claim now made upon it, and will defray the cost for the repairs of the Dredge while in its service, amounting to £130 which the Treasurer has been directed to place to the credit of the Madras Government.

2. But, in reference to the correspondence annexed to your letter under reply, reporting on the condition of the Dredge on its arrival at Paumben from Ceylon, which, it is stated, was in working condition though much in need of repair when it left Madras, and was returned in such a damaged state as to be unfit for work, the Madras Government having thus lost considerably by the loan, I am directed to remind you that the Dredge only arrived at Jaffna on the 7th of June 1860, that it was worked under Officers of the Madras Government, that on the 19th of July, it was reported that it had been sent to Jaffna with the ladder gear "in a state so thoroughly rotten that the "work was daily interrupted by breakages," that this was owing not to any undue strain, "but "simply from the rotten, crystallized state of "the iron" that the "ladder hoist was from 12 to 15 years old, and that scarcely a bucket was "less than five or six years old," and that "no satisfactory work could be done till the whole of "the iron work was replaced."

*Vide* letter from Civil Engineer and Commissioner of Roads to Colonial Secretary, No. 820, July 31st 1860.

Enclosure of letter from this Government to that of Madras, No. 69, August 10th 1860.

3. Mr. Danvers, the Engineer of the Dredge, an Officer of the Madras Government, gives even a worse description of the condition of the Dredge, in his letter of August 4th 1860, than that given by Mr. Folkard the District Engineer of Jaffna above quoted. He reports that "the keys of the beams have come out, that the "ladder is as bad as ever, that it is very hard to work with everything as rotten as the beams "are," and that "he fears they will come down by the run," that the Dredge had not been repaired for four years, that he had to examine the two centre beams every morning with great caution, and finally that Captain Brine's intention was "to lay her up and give her new beams "whenever he could procure them."

Enclosure of letter of this Government to that of Madras, No. 70, August 25th 1860.

4. This being its condition on arrival at Jaffna, it appears to His Excellency the Governor that it can scarcely be said that the Dredge was in an useful and serviceable state, when she was sent to Ceylon, as the defects here noticed could not have been the results of the stiff ground in which she was worked and which caused the necessity for the constant repair of the tackle which the Acting Civil Engineer "properly considered as an incidental charge upon the operation of dredging the channel," the charge of £130, out of £900 of total expenditure, having been incurred solely in replacing the iron work, which on the arrival of the Dredge was found to be in a defective state.

*Vide* annexed Extract from a letter of the Civil Engineer, of 25th September 1861, No. 984.

5. There appears, too, to be some inconsistency in the reports of Captain Ryves and Captain Paxton, the one describing the vessel on her return to Paumben as being "in a shameful "state of dis-repair and in far worse order," the other representing her to be "in as bad or worse working order" than when she was sent to Jaffna. The report of Mr. Danvers and of Mr. Folkard, I have above referred to.

Captain Ryves, Deputy Chief Engineer Southern Circle, No. 1,481, April 27th.

Captain Paxton, letter to Deputy Chief Engineer, Southern Circle, No. 1,437, April 13th.

6. With respect to the nature of the repairs executed in Ceylon, I am directed to annex an Extract of a letter from the Civil Engineer and Commissioner of Roads forwarding copy of one from his Assistant at Colombo, and to invite your attention also to copy of one from his Assistant at Jaffna under whom the Dredge was employed.

Civil Engineer, to Colonial Secretary, 25th September 1861, No. 984, and enclosure.

Mr. Folkard, to Civil Engineer Jaffna, June 24th 1860.

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From A. FOLKARD, Esq., Civil Engineer, Jaffna, to the Civil Engineer and Commissioner of Roads, Colombo, dated Jaffna, 24th June 1861, No. 239.

SIR,

1. In annexing copy of a letter received by me from Lieutenant Hankin, Acting Superintendent of Operations at Paumben, I have the honor to bring to your notice, that much of the material delivered over for the Steam Dredge, has been valued by them as old iron.

2. I beg to be allowed to protest against such a proceeding. Many of the shackles delivered over were new, and a great proportion equal to new. Those that were broken or worn required but superficial repair, and in the prices that I fixed for these, this necessary repair was taken into account. By these means the value of the iron work in shackles and bolts delivered over, has been reduced from £49-7-0 to £11-11-0. Nothing has been allowed for workmanship.

3. The buckets cost at the Colombo Factory as nearly as I could discover from the pay lists sent to me £200 for the twelve. The Madras Government value them at £6 each, scarcely I believe the value of their material. Some of the sheet material has been valued at a higher rate than I had to pay for it; but I would suggest that the various buckets, &c., should not be sold for merely the value of the iron, the whole material cost at the lowest estimate £255-18-3½. The annexed correspondence values it at only £114-9-0.

4. The following is a copy of my valuation of the material in detail:—

| | £. | s. | d. |
|---|---|---|---|
| 12 Iron buckets, with shoes complete, double backed and steal tipped | 200 | 0 | 0 |
| 90 Shackles, best iron (some requiring slight repair) | 45 | 0 | 0 |
| 80 Shackles bolts (some worn, some quite new) | 3 | 0 | 0 |
| 18 lbs. washers and keys | 0 | 9 | 0 |
| 1 Condensor piston rod (iron) quite new, 20 lbs. | 0 | 10 | 0 |
| 4 Tumbler ril bolts at 2*s*. each | 0 | 8 | 0 |
| 594 lbs. sheet iron at 21*s*. per cwt | 5 | 11 | 4½ |
| 26 lbs. sheet zinc at 4*d*. per lb. | 0 | 8 | 8 |
| 5 lbs. sheet composition at 2*s*. 3*d*. per lb. | 0 | 11 | 3 |
| Total ......£ | 255 | 18 | 3½ |

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From Lieutenant F. G. HANKIN, Acting Superintendent of Operations at Paumben, to A. FOLKARD, Esq., Civil Engineer, Jaffna, dated Paumben, 4th June 1861, No. 34.

SIR,

In reply to your letter of 1st May 1861, herewith I have the honor to forward a copy of the list of articles received from you on account of the Steam Dredge. The original of which has been sent to the District Engineer for submission to Government.

*Memorandum of Articles supplied to Steam Dredge from Jaffna.*

| | RS. | A. | P. |
|---|---|---|---|
| 2 Candies 17 tolams iron, at 45 Rupees per candy... | 115 | 8 | 0 |
| 2 Sheets zinc, at 2 Rupees each | 4 | 0 | 0 |
| 7 Sheets iron, at 15 Rupees each | 105 | 0 | 0 |
| 12 Buckets, at 60 Rupees each as per annexed Memorandum of Mr. Clements | 720 | 0 | 0 |
| Brass cheese plate | 200 | 0 | 0 |
| Total...... | 1,144 | 8 | 0 |

(True Copies.)

(Signed) WILLIAM THOMAS GIBSON.

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*Extract of a letter from the Civil Engineer and Commissioner of Roads, to the Honorable the Colonial Secretary, No. 984 of the 25th September 1861.*

" My reasons for thinking that this Government cannot in equity be called upon to pay the " £240, are, that no less than £900 was expended by my Department on the Dredge, consequent " upon the defective state of her gear when she arrived at Jaffna, and so thoroughly was she put " in order that during the last month of her employment at Jaffna, she accomplished more than " the average of her performance at Paumben."

" When returned by this Government, the only portion of her running gear and machinery " that was not in good order, was the funnel, which had from within a month after her first " arrival, to the termination of her work, to be covered with iron plates, it having been full of " holes, and had to be supported by upright bars and stays, it having been worn so thin as to " be capable of being dented by the finger."

" I beg leave to annex copy of a report from my Assistant Mr. Byrne, as to the character " of the work of repair executed for the Dredge in the Colombo Factory."

(A true Extract.)

(Signed) WILLIAM THOMAS GIBSON.

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From H. BYRNE, Esq., dated Colombo, 21st September 1861, No. 156.

SIR,

With reference to the Honorable the Colonial Secretary's letter to your address, of the 28th ultimo, No. 793, calling for any remarks you may have to offer with respect to the work done to the Dredge by your Department, I have the honor to report that the " twelve new buckets"

and the "new shackles and bolts to the bucket chain," made at the Government factory and which are represented as being of such inferior workmanship, that the rivets in particular are loose and that one or two of them "have come out though the buckets have not been used," were all carefully inspected by me before I sent them away, and appeared to be faultless, Mr. Folkard the Officer who had the Dredge at work, states in reference to these articles, "all "the buckets had been used, some of them to the best of my recollection for three months."

"The workmanship was in all respects perfect. The Engineer of the Dredge Mr. Danvers "said they were the best he had ever seen and would last out two or three of the others."

"They were almost equal to new when I delivered them over, but as they were made of "thicker iron plate than usual, the checks of the upper tumbler being much worn used to catch "them as they passed over and slightly bent the sides."

"The only thing I could find fault with was the quality of the iron used in the rivets. "One of them broke on being struck with a sledge, a heavy blow however; some of the rivets "worked slightly loose with the constant jarring, all of them, including those in the Paumben "buckets, did this after a time."

"The shackles sent from the Factory were patterns of neatness and strength, those made "here (*i. e.*, at Jaffna by a village Blacksmith) were rough, and were joined in too thicknesses as "we could not get iron of the size; but they worked perfectly."

To this testimony, from an Officer so strongly interested as Mr. Folkard was in securing the best workmanship that he could obtain for the money expended by him, it is unnecessary for me to add one word, except that the iron used in the bucket rivets was the best procurable in Colombo.

(A true Copy.)

(Signed) WILLIAM THOMAS GIBSON.

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No. 94. ORDER THEREON, 8th November 1861, No. 2,067.

1. The Governor in Council learns from this letter that the Government of Ceylon have waived the claim formerly advanced by them for £130, being the cost incurred in Ceylon in repairing the Paumben Dredge while in the service of that Government; and all things considered, His Excellency in Council resolves to waive the counter claim of this Government to be re-imbursed to the extent of 2,400 Rupees, the estimated cost of repairing the vessel on its return from Ceylon.

2. The foregoing letter will be communicated to the Accountant General in view, with reference to the close of paragraph 1, to that Officer making an adjustment of funds if any such be necessary between the two Governments.

3. A copy of the foregoing letter with its enclosures will be furnished to the Chief Engineer, with reference to Proceedings of Government, dated 9th August 1861, No. 1,512.

(Signed) J. D. SIM,
*Secretary to Government.*

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Ordered that the following letter be despatched.

No. 95. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Colonial Secretary at Colombo, dated 8th November 1861, No. 2,068.

SIR,

I am directed to acknowledge the receipt of your letter of the 21st October 1861, No. 78, regarding the bill of £130 for repairs executed to the Paumben Steam Dredge while in the service of the Colonial Government, and to state in reply that His Excellency in Council accepts the offer of the Colonial Government to defray the cost of the said repairs as a final settlement of the subject.

Read the following papers:—

No. 96. Read the following letter from the Secretary to the Government of India, to the Secretary to the Government of Madras, dated Fort William, 5th July 1861, No. 2,407:—

SIR,

1. I am directed to acknowledge your letter No. 1,136 of the 21st June, regarding the Upper Godavery.

2. The Governor General in Council entirely approves of the purpose of the Madras Government to devote the two lakhs which were assigned to the Upper Godavery works, in the Budget, to the object of opening roads as portages to connect the navigable reaches of the river; by such means obtaining uninterrupted though imperfect means of communication at the earliest possible period.

3. But I am directed to add that the Government of India would view with great regret the suspension of the works designed to enable boats to pass the barriers; and the Governor General in Council is therefore prepared to sanction an addition to the Budget assignment, not exceeding two lakhs for the present year, in order to carry on work at the Sinterala Barrier. His Excellency in Council therefore deprecates any stoppage of this work.

4. In coming to this decision the Governor General in Council admits that the amount of traffic to be expected between Nagpoor and the sea is very imperfectly known. But there can be no doubt that with a fine Province producing cotton at one end of the valley, with the sea at the other, with a large river already partially navigable traversing its entire length, and with no such extraordinary impediments as the Western Ghâts to be overcome, the capabilities of commerce must be large, and such as it is a national object to develope.

5. Compared with this object, the sums which the proposed anicuts and canals are expected to cost cannot be deemed excessive.

6. Even should the cost of the Sinterala works reach the higher cost of ten lakhs, the addition of a reach of 90 miles of navigable river to the lower section of 137 miles of navigation now open, would be cheaply purchased, apart from possible returns on account of irrigation.

7. The length of time which must elapse before the works are completed, is a good reason for commencing with the cheaper though less perfect communication proposed in your letter, which can be speedily opened. But it is also a strong reason for not losing another season in the commencement of the more perfect work, which will take longer to complete.

8. With regard to any injustice to Madras from the devotion to this purpose of a portion of the Madras Budget assignment, I am directed to observe that the Governor General in Council cannot admit that any injustice is done, or is likely to arise. The whole sum apportioned to the Budgets of the different Governments and Administrations is so apportioned, not on any single consideration of revenue or surplus, but on a combined view of several considerations, among which considerations not the least weighty is the share to be taken in the development of important national objects such as this. The work must be executed out of the Madras assignment, because unquestionably it must be executed by Madras agency. Were the Governor General in Council to say that the additional grant for the Godavery navigation, now authorized, should be given as a supplement to the Nagpoor Budget rather than to that of Madras, the request pressed upon the Government of India in the 4th paragraph of your letter would really be complied with, whilst the benefit to Madras would scarcely be tangible.

9. But in fact, whilst the benefits to Nagpoor are contingent and comparatively remote, those accruing to Madras should be direct and immediate. It may be some time ere the produce of Nagpoor finds its way more cheaply and safely to the sea by way of the Godavery than by way of Berar to Bombay, or by way of Mirzapoor to Calcutta. But every ton of trade through Coconada or Coringa must pay customs to Madras and all the salt sent up the Godavery will pay Madras excise.

10. In conclusion I am directed to say that in this letter the *objects* alone of the works projected by Captain Haig on the Upper Godavery are in view. The Government of India by

no means intends to urge their prosecution, should His Excellency the Governor in Council not be satisfied as to the efficiency or propriety of the means proposed.

11. Nor has His Excellency the Governor General in Council changed the view which was expressed to Her Majesty's Government, in December last, that the work is an appropriate one for execution by a private Company. But of such a Company nothing further has been heard here.

12. The substance of paragraph 3 of this letter was communicated by Telegraph to His Excellency Sir William Denison, viâ Rajahmundry, on the 3rd instant.

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No. 97. MINUTE BY THE HONORABLE THE PRESIDENT.

1. With reference to the letter from the Secretary to the Government of India, No. 2,407, on the subject of the Upper Godavery navigation, I believe that the Despatch lately sent to the Supreme Government on this very subject will be sufficiently explanatory of our objects in the course which we have pursued with relation to the work to be performed during the course of the present year. We wished to expedite as much as possible the opening of the river, and the determination of the traffic towards it, as then an opportunity would be afforded to the Government of ascertaining with some approximation to accuracy the tonnage which would be likely to pass up and down the river, and, consequent upon this information, to arrive at a positive decision as to the character of the works which it would be expedient to execute to improve the navigation.

2. I may observe, however, with reference to the statement made in paragraph 6, of the benefit to be derived from the completion of the Sintarála works as an independent undertaking, that, from Captain Haig's own statements, and from the information derived by me from other Officers during my late visit to the Godavery, the benefit to be derived from this additional 90 miles of navigation thus very partially thrown open will be very trifling; for the ground on the banks of the river being composed of coarse sienitic ranges of hills, produces nothing of a marketable quality but timber and bamboos, for neither of which are any special facilities required.

3. I am however quite prepared to admit that there is fair reason to believe that a large traffic will be gradually developed with the upper part of the country watered by the Godavery, but the character and cost of the works to be executed for the improvement of the river appear to me to require more consideration than has yet been bestowed upon them. This remark, however, does not apply to the works at the Sintarála Barrier, which are, so far as the principle upon which they are about to be constructed, well adapted to the object which they are intended to answer.

4. The remarks in paragraphs 8 and 9 of the letter from the Secretary to the Government of India require some comment.

5. There can be no doubt of the justice of any arrangement which throws upon the Presidency of Madras a due proportion of the charges for the Military and Naval branches of the Service for the Supreme Government, for the debt, &c., in fact, the Madras Treasury should be debited with its proportionate share of the general outlay of the country.

6. But the case is altered when it is proposed to take from the sum appropriated to the Public Works of Madras a sum of no less than eight lacs, while half this amount is applied to a work which, although it may prove of some contingent benefit to Madras, is yet intended to give an out-let and a market to the inhabitants of our own districts in Nagpore and to those of the Nizam on the upper affluents of the Godavery. To this population it is hoped that the work will be essentially beneficial. Were we to consider only the benefit which Madras may derive from this work, I am afraid we should hardly be justified in sanctioning any expenditure.

The question involved however is really one of importance, and it may be stated as follows: Is it reasonable or just that the Revenue derived from Madras, or to make it more general, from any Presidency or Territory which has a separate Government which may be considered to represent the interests of a large section of the community, should be applied to the construction or maintenance of the Public Works of a separate and independent portion of the country?

My opinion is that it is not just or reasonable that this should be done.

W. T. DENISON.

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No. 98. MINUTE BY THE HONORABLE E. MALTBY.

1. For the reasons given in the President's Minute the clearing a passage through the Sintaréla Barrier only, would be of little advantage, although entailing a large expenditure, because the additional 90 miles of navigation thus opened lead through an unproductive country and would not take boats to the Cotton Districts. To attain the object in view expensive works must also be undertaken at the upper Barriers, and before entering on so great and costly a project, it seems to me advisable that Government should have more exact and specific information regarding the prospects of success in opening out the river. This is the more essential because the Railway under construction between Omravatty and Bombay will afford an outlet for the Berar Cotton at all parts of the year; while, even if the Godavery was cleared for navigation, it seems to have no water in it at that season (March and April) when the Cotton crop comes into the market. Again, the difficulty of obtaining labor in the unhealthy and thinly inhabited country through which the Godavery passes is a serious impediment, and would apparently render it impossible to complete the works under many years. So great is the local scarcity of labor that Captain Haig applied to Government to send him 2,000 Coolies from Travancore and the Southern Districts where he supposed famine to prevail, the expense to be defrayed out of the Famine Relief Fund. But independently of the natural obstacles to transplanting such a body of men, the Government had been able to decline the offer of pecuniary aid made by the Lord Mayor of London on the ground that no severe pressure of famine was felt in this Presidency, and Captain Haig's project therefore fell to the ground.

2. Under these circumstances it appears to me that the Madras Government has done all that is at present advisable in ordering the construction of roads round the Barriers, and instituting further inquiries regarding the Upper-Godavery, its affluents, and the country through which it flows, before entering on more costly works.

3. The principle advocated by the President that a portion of the expense of this undertaking should be borne by the Nagpore revenues seems to me sound, but if the Godavery can be successfully opened for navigation, I should be unwilling that the discussion of this point delayed so important a project.

*22nd July* 1861. E. MALTBY.

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No. 99. From the Secretary to the Government of India, to the Secretary to the Government of Madars, dated Fort William, 6th August 1861, No. 2,820.

SIR,

1. I am directed to acknowledge your letter No. 1,334 of the 18th July.

2. There is no difference of opinion, it is believed, as to the importance of the earliest possible completion of the roads round the Barriers. And the Governor General in Council is glad to observe that the Government of Madras does not contemplate, as your former letter seemed to imply, the indefinite adjournment of the work of opening continuous navigation. What His Excellency in Council desires to urge is, that if the amount of procurable labour prove sufficient for employment on the works of the lower Barrier without retarding the completion of any of the three tram-ways, the work on the barrier should go on earnestly.

No. 1,136, dated 21st June.

3. The Governor General in Council believes that if labour sufficient for both purposes be available, the money already allowed will be enough to admit of both being prosecuted. His Excellency will be glad to be informed whether this is the case. If superintendence should be wanting, the Government of India could supply it.

4. The Governor General in Council will also be glad to know whether, in the event of the tram-ways round the Barriers being completed in time for the transport of the next Cotton crop, boats in any numbers at present exist on the upper reaches, or what arrangements will be made for the water transport.

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No. 100. MINUTE BY THE HONORABLE THE PRESIDENT.

In a former Minute I went into the consideration of the arrangements which it would be desirable that the Government should make to facilitate the traffic of the Upper Godavery, on the supposition that the means of bringing down the crop of 1862 would be afforded in consequence of the completion of light railroads round the three principal Barriers. In the Despatch from the Government of India dated 6th August 1861, on the subject of the navigation of theriver, it would almost seem to be inferred that the whole scheme for the improvement of the navigation had been discussed and determined, whereas in point of fact the whole subject requires the most careful consideration. I admit that under any system of improvement a plan analogous to that proposed by Captan Haig for the improvement of the lower Barrier will be necessary; but it is yet a matter of grave consideration what the width of the cutting should be, what the size of the Locks &c., &c. In fact the details of even this portion of the scheme require much consideration, and these must be to a certain extent dependent upon the character and amount of the traffic, the power of the steamboats to be employed; while this latter question must depend upon the velocity of the stream, which of course will be regulated by the mode in which it is proposed to overcome the fall on the River, whether by force of steam, or, as in other places, by dividing this fall into a series of steps by Anicuts and Locks.

Captain Haig's original plan was merely an improvement of the existing channel of the river. He proposed to overcome certain impediments at these points between Dowlaishwaram and Chandah, a distance of about 1,012 miles, to clear away some rocks in the bed of the river, to improve the channel where it was shallowed by sand banks, &c., for which his estimate was 30 lacs; for this sum facilities were offered for navigating the river when the water was in a middling state, by boats descending, and the improvements at the Barriers enabled them to ascend from one slack water part of the river to another; but as this estimate did not include any provision for retaining a supply of water during the dry season, the river was practically closed as a means of communication for four months, while for two months additional the navigation would be difficult unless for boats specially constructed for shallow water navigation.

To meet this difficulty, and to provide means of supplying during the dry season water sufficient for both navigation and irrigation, Captain Haig submitted a second estimate. He proposed to retain such a quantity of the monsoon water in large Tanks to be constructed upon the head waters of the different rivers, as would, when poured into the channel in the dry season, keep the water at a fixed height sufficient for the navigation of vessels drawing a certain depth of water. His estimate for this was of course vague; it was based upon the supposition that on an average it would be possible to construct the works for retaining water at some fixed cost per 100 cubic yards, and as he supposed that a certain number of cubic yards would be daily required to increase the usual stream of the river over a given period of the year the cost of such work might easily be ascertained. The differences between Captain Haig's plan and the system of flushing adopted in the Thames and other rivers, is merely that in the Thames the flush is periodical, once or twice a week, whereas Captain Haig proposes to keep the water at a permanent level, and so far as the convenience of traffic is concerned his plan is decidedly the best. There is, however, one great objection to this scheme, and it is this, that while it

The amount of this additional estimate raised the cost of the improvement of the navigation of the Godavery from 10 to 30 lacks.

provides a sufficient quantity of water over the shallow places of the river it does so by increasing the velocity of the current, and this is already sufficient to present a serious obstacle to the up traffic. It may be said that this traffic is not of much importance as compared with the down traffic, and this is true, but the boats which convey the down traffic must make their way back again against the stream, and every addition made to this velocity of the current is an impediment to trade.

The question therefore is, whether adopting Captain Haig's principle generally, it might not be better to extend it in one direction by making two or three more Anicuts, and thus reducing the velocity of the stream, while at the same time a greater depth of water would be thrown permanently over shallow portions of the river. It is proposed to raise the Anicut at Dowlaishwaram in order to throw more water into the irrigation channel: the effect of this would be to back up the water for a greater distance, and to bring it, at all seasons, nearly to the same state as it was when I went up in June. A second Anicut near the point where the river issues from the hills would not only back up water and facilitate the navigation, but would furnish a supply of water which would be well expended in irrigating the land on both sides the river, of which there is some quantity. By adopting this enlargement of Captain Haig's plan in one direction it might be curtailed in another, for the same quantity of water would not be required when the current is reduced to one mile per hour, as would be necessary when the stream was running at the rate of 2½ or 3 miles; a greater depth of water, too, would be given and the navigation thereby improved. In point of fact the amount of water which it would be necessary to store would probably not much exceed that which would be required to supply the irrigation channels; at present the land below Dowlaishwaram absorbs all the water of the river at the very dry season. Any additional area of irrigation must therefore be provided for by retaining a sufficient supply in Reservoirs. I do not of course pretend to give even the slightest possible approximation to the cost of the scheme thus modified; it may very possibly exceed that proposed by Captain Haig; but if the Godavery is to be the outlet of a large traffic, if it is to be the means of opening a cheap and easy means of communication to the great plains of Central India, then the easier the gradients and the less power required the better.

I have said that upon the decision of this question will depend to a certain extent the character of the work to be executed at the lower Barrier. In his last plan Captain Haig proposed to make his Lock 200 feet long and 45 feet wide—I suppose in order to pass up steamers of power sufficient to tow Boats against the current. Now, Locks of this size involve a great expenditure. The whole of the work must be of a better description than that which would be necessary for a smaller Lock. The gates especially for Locks of such a width are works requiring no ordinary skill and care, more especially when it is recollected that the upper gates have to stand the pressure of flood water that is of an additional 18 or 20 feet of water. While then there can be no objection to allow Captain Haig to proceed with the preparation of materials for the Anicut and the ordinary stones for the Locks at Sintarála and in clearing the ground for the excavation, yet it would not be advisable to attempt more this year until the whole plan of the work is definitively settled.

W. T. DENISON.

*19th August* 1861.

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No. 101. MINUTE BY THE HONORABLE THE PRESIDENT.

1. With reference to the letter from the Government of India, dated 6th August 1861, on the subject of the works in the Upper Godavery, I think that there are two points which ought to be brought prominently before the Governor General in Council as bearing not only on the immediate results which are anticipated from the establishment of some means of communication by means of the roads round the Barriers, but also on the character and cost of the works which will be required to make the river navigable for the whole or a portion of the year.

2. As the first of these subjects has a direct relation to the question asked in the fourth paragraph of the letter alluded to, I will deal with it first.

3. The works now proposed will give to the inhabitants upon the rivers Windah and Wyne Gungah the means of bringing down such surplus produce as they may be willing to dispose of, and it is possible that a knowledge of the fact that the communication will be open in the course of next year may induce some to increase their area of cultivation in the prospect of having a better market open to them; this however, will hardly apply to the cultivators of Cotton, unless indeed merchants or agents will proceed to the country in the vicinity of Nagpore, and by advancing money to the Ryots will stimulate them to substitute Cotton for their usual crops.

4. This is the course pursued by the Bombay merchants, to whom nearly the whole of the surplus Cotton of Berar is now consigned. I mention this because in the letter from the Government of India it appears to be taken for granted that a very large amount of Cotton will be waiting for transport, an opinion which I do not think is based upon any satisfactory data.

5. There is another subject with reference to which it is very desirable that some distinct understanding should be arrived at. It would seem that the Governor General in Council contemplates the completion by the Government of all the arrangements for the transport of goods up and down the Godavery; that is, that the Government should become carriers. To this it appears to me there are very many objections. For my own part, I have never contemplated the continuance of the arrangement by which the Government finds steam power for the up traffic; as an experiment it is perhaps allowable, but should the traffic be sufficient to pay for the employment of steam power, private enterprise will soon step in to supply the demand; should the traffic not be adequate to this, it is not desirable that the Government should be put to the expense of maintaining a number of costly steamers for which there will be no adequate employment.

6. With reference to the boats which may be required to convey the Cotton or other produce down the stream, I can hardly think that it would be wise in the Government to go to the expense of constructing a number of boats upon the hypothesis that there may be some use for them; if a merchant has made his arrangements for purchasing produce in order to send it down the river he will of course consider carefully all the arrangements which it will be desirable to make in order to secure as large a profit as possible upon his transaction. He will look to the cost of conveyance, the purchase of boats, their maintenance, the profit to be derived from a back traffic in salt, and imported goods, &c. If he finds that the expense of maintaining three or four boats is too great, absorbing too large a portion of his returns, he will of course be glad to throw the whole risk and cost of transport upon the Government. If however it will not pay private parties to undertake the cost of transport, it is very certain that it will not pay the Government. I should therefore deprecate any attempt on the part of the Government to act as carriers. It will be as much as it ought to do to undertake the steam-boat portion of the work; that is, to supply power to bring up the boats against the stream, with such back-load as they may be able to engage, and even this should cease in the course of a few years. Any attempt to construct boats and to monopolize the carrying trade will be certain to fail; while it will lead the Government to incur a heavy expense in the first instance in the construction of boats, &c., and in the maintenance of an establishment of Traffic Managers, &c., over whom it will be difficult if not impossible to exercise any proper supervision.

7. The other branch of the subject will be dealt with in a separate Minute.

W. T. DENISON.

19*th August* 1861.

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No. 102. Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India, (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 8th July 1861, No. 30.

SIR,

1. I have had before me in Council your letters, Nos. 77 of the 6th December last, and 36 of 17th April last, the one communicating your views as to the expediency of committing the

Godavery navigation works to private Agency and the other reporting the arrangements made for most effectually applying to their intended purpose, the three lacs assigned last year by the Supreme Government, expressly for operations on the Sintarála, or first, barrier of the Godavery.

2. On the former subject it will be sufficient to say that any idea of the Godavery works being undertaken by a private Company has, for the present at least, been abandoned, and that there is no alternative but that the improvement of the River should be carried on by Government as rapidly as its resources will permit.

3. The more recent of your letters under reply shows that vigorous exertions are being made for the attainment of this great national object. Towards the end of last January, you placed at the disposal of Captain Haig the sum of Rupees 1,64,000, that being as much as he considered he should be able to expend during the three remaining months of the then current working season. With that amount he hoped that by the 30th April considerable progress would be made at Sintarála, on the Anicut and Canal, and also in quarrying stone, building kilns, laying down rails, and otherwise preparing for the resumption of work in the Autumn; more than ten thousand pounds worth of plant, of his own selection, having previously been sent out to him from this country. The date named by Captain Haig having been reached several weeks ago, I am desirous of learning exactly what progress has actually been made up to this time; how far the Anicut and Canal have advanced, what portion of the three lacs has yet been expended; and how nearly the outlay has hitherto corresponded with the estimate. I wish also particularly to know what is the largest assignment likely to be made to enable Captain Haig to resume operations after the freshes, in November next, and how much he is expected to accomplish in the course of the working season which will then commence.

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No. 103. Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India, (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 30th August 1861, No. 41.

SIR,

1. I have had before me in Council your letter No. 57, of 21st June last on the subject of the Upper Godavery Works, reporting the progress made last season, and announcing a proposed alteration of the plan for future operations. You consider that, under existing circumstances, it would be unadvisable to proceed at present, with the expensive works proposed for making the river navigable throughout its course, and that it would be preferable, in the first instance, to undertake no more than the connexion of the navigable reaches by means of comparatively inexpensive road-ways. From the enclosed copy of a Despatch, addressed by me very recently to the Government of India, you will perceive that looking not only to the general importance of opening the river, but to the expediency, in the present state of America, of doing every thing to facilitate the supply of Cotton, Her Majesty's Government are desirous that a continuous line of navigation should be formed, with the least possible delay, along portions of the Godavery and its tributaries, from the Nagpore Cotton field to the sea.

Dated 2nd August (No. 39) 1861.

2. With the increased means about to be placed at your disposal for the purpose, you will no doubt gladly co-operate to the utmost in promoting the accomplishment of an object of so much national importance. If however, you consider that, with the view of obtaining more speedy results, it might be advisable, as a temporary expedient, to undertake simultaneously the construction of cheap road-ways round the Barriers, Her Majesty's Government will not disapprove of your adopting that course, provided the progress of the larger and more permanent works be not delayed in consequence.

Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India, (Public Works), to His Excellency the Right Honorable the Governor General of India in Council, dated India Office, London, 2nd August 1861, No. 39.

MY LORD,

1. You are well aware of the interest with which the proposed establishment of a continuous line of navigation on portions of the Godavery and its chief affluents, has for some time past, been regarded by Her Majesty's Government. I have myself never entertained any doubt of the great advantage which would accrue from the execution of the scheme, but financial difficulties have hitherto prevented me from issuing positive instructions for the adoption of any decisive course of action. I find now however, from your latest advices, that the cash balances in the Treasury are so much larger than had been anticipated as to allow of a sufficient assignment being made for the vigorous prosecution of the Godavery works.

2. That the expenditure for these works will ultimately be advantageous we have, I think good reason to believe, and even were there less assurance of their proving directly remunerative the indirect effect which they cannot fail to have in contributing most materially to the supply of the English Cotton Market, would render it incumbent on Government, more especially with the present prospects of the supply of Cotton from the United States, to undertake them at the earliest possible period.

3. It is my desire therefore that the Madras Government should be authorized to proceed vigorously with the works for opening the Godavery, and its tributaries, from Dowlaishwaram upwards to the southern parts of the Nagpore Cotton field, and should be supplied with fund for carrying on the various works necessary for this purpose as fast as the needful labour may be procurable, and as may at the same time be consistent with their careful execution.

4. In treating of the Enchampilly and Dewalamurry Barriers Captain Haig has suggested two modes of overcoming the obstacles occurring there, viz., either by means of one or more anicuts or by canals led off from the right bank of the stream. He himself seems disposed to prefer the former plan, and, unless on further examination, canals should be found to offer very peculiar advantages, it would seem to be better to confine operations to the bed of the river, so as to avoid all necessity for interfering with land belonging to the Nizam or his subjects.

5. This is also more desirable as regards the upper Barrier, as the side canal would leave the main channel of the river above the point where the Wyne Gunga falls into it.

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No. 104. MINUTE BY THE HONORABLE THE PRESIDENT.

1. With reference to the Despatch, Public Works, No. 41, and its enclosure, being a copy of a Despatch to the Governor General on the subject of the navigation of the Godavery, but few remarks seem called for. The works contemplated in the shape of Railroads round the Barriers are not intended in any way to supersede the permanent works, but are merely for the purpose of expediting the transport of produce from Nagpore down the river, and to facilitate the passage of salt, &c., upwards; the effect would be to cheapen labor upon the principal works, and generally to benefit the country, which, were we compelled to wait for the completion of the permanent works, would probably find some, other outlet for its produce. I am not therefore disposed to alter or modify the scheme which was proposed by Captain Haig, and adopted by the Government, of constructing these temporary works, so as to provide for the exit of the crop of 1862, in June of that year. Before however the Government will be in a position to carry out energetically the permanent works a decision must be come to as to the character of these works, proper plans and estimates should be submitted, and the whole scheme so far decided on as that any work, however detached it might be, should form part of the great scheme.

2. Captain Haig's rough scheme and estimates provided for an outlay of £300,000 or 30 lacs, in improving the navigation at the three Barriers by Anicuts and Locks—for clearing the bed of the stream of rocks and sand banks. By such an outlay he calculated upon getting an improved navigation for eight months in the year. Such navigation however would have required, especially for the up traffic, steamers of great power, as there would always have been a current against them varying from 5 to 8 miles per hour. These steamers would compel the construction of larger locks and other modifications of the scheme.

3. It is therefore to me a question whether a plan suggested or alluded to by Captain Haig would not be an improvement upon this one. I mean that of dividing the river into steps by means of Anicuts and surmounting the rise of each step by means of a lock or locks. The fall of the stream would thus be rendered nearly uniform and be reduced to a minimum. While even in the dry season, except perhaps towards the very latter portion of it, the Anicuts would dam up the water nearly to the lock above it, and the navigation would be secured for ten or eleven months instead of eight, and would require steamers of much less power than those which it would be necessary to use under the original arrangement. I propose to meet Captain Haig and Colonel Cotton when I return to Madras, and to go carefully into this question, pending which Captain Haig may be instructed to prepare to work at the Sintarála Anicut and Canal. The only point respecting which there is any question being the dimensions of the locks, these must be carefully considered.

4. There is one question raised by the Despatch of the Secretary of State, namely, the relation in which the works which we are about to execute stand to the Nizam, which requires consideration. There can be no question upon legal grounds, that we have not the slightest right to abut our Dams or Anicuts upon the Nizam's territory, or to raise the water in the river so as to flood any portion of his land. Therefore, as I remarked in a former Minute, it is essential that before we commence our work we should have a distinct understanding with the Nizam as to the right of the Government to construct any works, intended for the improvement of the navigation, indifferently upon our own ground or upon his. This has been brought under the notice of the Governor General, but I wish to enforce the necessity of this specially.

5. There are other questions such as the supply of water, which will require much consideration. In Captain Haig's original scheme a portion of the water required (a large proportion) was to be, if I recollect right, supplied by the Godavery, this being a river (in the upper parts of which the water was to be stored, or through which it would have to pass) which is included altogether within the territories of the Nizam; as however the amount of water required to secure the navigation of the river throughout the year will depend entirely upon the principle upon which the works are to be constructed—that is whether by the use of Anicuts and Locks, or by pouring supplies of water from other sources—these questions may be postponed for the present; they must however be determined before the works are commenced.

W. T. DENISON.

*6th October* 1861.

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No. 105. ORDER THEREON, 8th November 1861; No. 2,069.

1. Resolved that a report be submitted to the Secretary of State of the further proceedings of this Government in connection with the Upper Godavery works, with reference to his Despatches dated 8th July and 30th August 1861, Nos. 30 and 41.

2. A similar report will also be submitted to the Government of India, with reference to the letters from that Government, dated 5th July and 6th August 1861, Nos. 2,407, and 2,820, also recorded above, and application will at the same time be made for the additional grant of two lacs referred to in paragraph 11 of the Order of Government 31st October 1861, No. 2,017.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 106. Read the following Endorsement of the Chief Engineer, dated Chepauk, 23rd October 1861, No. 6,309.

Read the following letter from Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, dated Camp Carangooly, 9th October 1861 :—

SIR,

1 Report on Trunk Road No. 1.
1 Original letter from the District Engineer Madras, No. 615, dated 9th August 1861.

1. In continuation of my letter, dated 28th September last, and with reference to your Proceedings, No. 3,123, dated 25th July 1861, I have the honor to forward my report upon the state of Trunk Road No. 1, in the North Arcot and Madras Districts.

2. This is the last report you have to expect in connection with my recent tour.

From District Engineer Madras, No. 615, 9th August 1861.

3. The original letter received in your Endorsement, dated 21st August 1861, is returned.

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TRUNK ROAD NO. 1.

1. As this road is, in the main, in such excellent order in the North Arcot District, and as that in the Madras District is the portion, the state of which Government have more particularly expressed themselves desirous to be informed about, I shall merely make remarks upon the road as divided into stages in the former District, particularizing the condition of each mile only, in the Madras District.

2. *From Vániembadi to Ambúr.*—The first mile is in the Salem District, and is being re-coated with good gravel under the charge of Mr. Williams, Overseer in that District. The remainder of this stage is for the most part in capital order. In some places however, I observed a most unskilful style of road repairs in force, *common earth* being used mingled with stones.

3. The material used in metalling is not of that hard texture which was formerly used in making the road, and it crushes and pulverizes very soon. If, as the Overseer, Mr. Enwright, informed the District Engineer and myself, the old quarries are exhausted, new ones should be sought for and opened.

4. *Ambúr to Pallikonda.*—The remarks to be made on this stage are very similar to those made on the former. Road generally in fair condition, common earth being used in parts for repairing portions, and stone brought for metalling—soft.

5. *Pullikonda to Vellore.*—Road for the most part in good condition. The roller much wanted here and there, want of attention exhibited in one part near Totallum where a large pool had been allowed to form in the middle of the road and no attempt had been made to repair it.

6. *Vellore to Arcot.*—The road is in excellent order throughout.

7. *Arcot to Wochery.*—To Wallajahnugger very good. East of that town some repairs are required. Here again in places I found earth being used in mending the middle of the road.

8. *Wochery to limits of Madras District near Damul Tank.*—Road in excellent order.

9. The traffic on the portion of this road west of Arcot is extremely limited at present. East of Arcot the Cotton carts come in from the north to collect at Wallajahnugger. The establishment kept up is a Pygast and 2 Coolies (with badges) for every 10 or 12 miles.

10. The length of road to be maintained in this District is 71 miles for which an annual allowance of 200 Rupees a mile or Rupees 14,200 in all was sanctioned by Government in their Proceedings, No. 1,840, dated 29th August 1860.

11. This sum I believe to be quite sufficient for the requirements of the road.

12. The Executive Officer and Overseer must give closer attention to this work ; it is difficult to suppose that if the Pygasts had been properly warned against the impropriety of repairing the middle of a metalled road with common earth that they would have persistently continued to do so.

13. *Madras District*:—

| No. of Mile. | Remarks. |
|---|---|
| 54th, 53rd, 52nd | In very fair order, needing only a little repair here and there. |
| 51st | Requires to be re-made at about the middle of this mile, otherwise good. |
| 50th | Should be reformed near Balchetty's Choultry, and in other parts. Half of the road has been re-coated with metalling. A little material collected. |
| 49th | West portion very bad with the exception of one or two places; this mile requires to be entirely reformed. |
| 48th | This mile needs repairs here and there. The road to Conjeveram turns off here. |
| 47th | Partly in laterite, partly in hard white stone metalling. The former portion cut up, the latter in very fair order. |
| 46th | North side re-coated for about 2 yards broad throughout, the remaining portion should be metalled at once and the whole well rolled. No materials collected. |
| 45th | North half re-coated as in last mile. South half very bad and should be re-metalled at once. Very little material collected. At this point the road to Arconum branches off. |
| 44th | North side re-coated for a width of 2 yards. South side not so, but it is generally in fair order, repairs only needed here and there. Near 44th mile-stone, branch road to Conjeveram on the bank of a large tank. |
| 43rd | Freshly re-coated throughout on north side. The south side of western portion of this mile, good ; but in middle and eastern portion up to bridge are many holes, some being filled with a pudding of clay and round stones. In this mile is a large bridge in good order. Good white stone metalling collected near bridge. |
| 42nd | Greater part of north side re-coated 2 yards broad. South side requires to be done soon, as it is in lumps, and generally in bad repair. |
| 41st | North side re-coated 2 yards broad, except for about 300 yards. South side in bad order, broken stone collected. |
| 40th | Re-metalling done on the north side at west end for 100 yards. South side bad. Plenty of material here collected, and should be used. Opposite Rájáh's Choultry are hollows. East of Rájáh's Choultry to 39th mile-stone bad, except for a few yards. |
| 39th | In fair order, 2 or 3 road dams lately metalled over. A few repairs required here and there. |
| 38th | Half re-coated on north side and nicely rolled. South side to be done. Branch road leads off to south side. |
| 37th | Road all in laterite and in capital order. |
| 36th | Laterite re-coated, *half width* at west side, should be completed. In the rest of the mile it is of full width and in good order. |
| 35th | Road in excellent order, all laterite. |
| 34th | Do. do. do. |
| 33rd | Fair order for 300 yards. North side re-coated with laterite. |
| 32nd | Not in such good state as the 31st mile, but is now being repaired throughout. |
| 31st | In fair order. |
| 30th | In fair order, portion re-coated on the north side except 100 yards. A part of this mile is formed of laterite, a part of stone metalling. |
| 29th | Metal laid on south side. No material collected for north side. |
| 28th | Metal laid on south side. Materials collected to go on with. |
| 27th | Half width metalled for the greater part on the north side, but only partly on the south side. The rest should be done at once. |
| 26th | Re-metalled full width and is in fair order. Only a few repairs required. |
| 25th | In fair order. In parts north half re-coated. South side should now be attended to. |
| 24th | In very fair order, a few patches to be repaired. |
| 23rd | In fair order. Some repairs should be effected after the monsoon. |
| 22nd | Fair order in parts. Others need attention, which they are receiving as coolies are employed on this mile. |
| 21st | In fair order. North side not long ago re-coated. Some ruts however require to be filled in. South side also re-coated, excepting certain gaps here and there which should soon be attended to. |
| 20th | For the most part in very fair order, but some rough portions need to be repaired. |

| No. of Mile. | Remarks. |
|---|---|
| 19th | North side re-coated but needs repair. Some materials collected. The western quarter of this mile is in very fair order. |
| 18th | No sign of recently having been re-coated. Broken up patches throughout this mile require repair. The road on the bridge of 7 arches over the Chembrambákum Tank Supplying channel is being attended to. The drainage of the road west of the bridge should be looked to. It is now allowed to come all down the road. The middle arch of the bridge would be better for a flooding. |
| 17th | In bad order, some few materials collected. |
| 16th | West portion in bad order. Middle, better. East, good. |
| 15th | This mile is formed of granite metalling laid on the north and south sides, and of laterite in the middle portion. It needs much repair. |
| 14th | Newly done, and is in good order, except that the north and south sides having been separately done, have not united properly in the middle, down which there is a sort of continuous rut. |
| 13th | In Poonamallee. In very good order. |
| 12th | In good order. |
| 11th | In very fair order. Some repairs required. |
| 10th | In good order. |
| 9th | North side re-coated nearly throughout, but not rolled. No coolies working. South side in bad order. |
| 8th | In bad order. Part of the north side partly re-coated but left alone. |
| 7th | In very fair order, but much of south side wants re-coating. |
| 6th | A great many holes to be repaired. Metalling collected. |
| 5th | In fair order. North side metalled, south side requires it. Road over Kúam Bridge being repaired. |
| 4th | Requires some repairs. |

14. Such is the general condition of this road in the Madras District. Not having before seen the road, at least not for years, I am unable to say if much improvement has been effected. On my next visit I shall be better able to report on this point.

15. The traffic is not what I expected to find it. I don't think there were 100 carts a day passing over any one mile. At any rate the present allowance of Rupees 500 per mile on the 50 miles amounting in the aggregate to Rupees 25,000 is sufficient in my opinion to bring the road into order, and then to maintain it; but it is of the first importance that skilled superintendence should be employed upon it, and this, I believe, it had not in Mr. Howard. It is very desirable I think now that he is gone that an Overseer trained in the old road Department should be appointed to the charge of this road.

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Submitted for the information of Government in continuation of the Chief Engineer's endorsement, No. 5,834, dated 11th instant.

2. The Deputy Chief Engineer reports that the undermentioned stages of Trunk Road No. 1 in the North Arcot District are in excellent order, and that the others* are in fair condition.

From Vániembadi to Ambúr.
,, Vellore to Arcot.
,, Woochery to limits of Madras District.

* From Ambúr to Pullicondah.
From Pullicondah to Vellore.
From Arcot to Woochery.

3. Colonel Boileau states that the traffic on Trunk Road No. 1 to the west of Arcot is very limited, and considers that the annual† allowance sanctioned for the maintenance of the line in the North Arcot District, viz., Rupees 200 per mile, is quite sufficient for its requirements.

† Rupees 14,200.

4. Captain Prendergast's particular attention will be called to the remarks contained in paragraphs 2, 3, 4, 5, 7 and 12 of the Deputy Chief Engineer's report, and he will be requested to put a stop to the existing practice of repairing portions of the road with common earth, to adopt measures for opening new quarries from which to obtain proper material for its repair, and to issue the necessary instructions for such parts as are in bad order being at once attended to.

5. In the Madras District, the state of the road is reported as follows :—

| | |
|---|---|
| 5th 7th 10th to 12th, 14th 19th to 26th, 30th to 33rd, 36th 38th 39th 43rd 44th 47th 48th and 51st to 54th mile. | In fair order—29 miles. |
| 13th 34th 35th and 37th mile. ............ | In excellent order—4 miles. |
| 8th 9th 17th 18th 40th to 42nd and 49th mile. 4th 6th 15th 16th 27th 28th 29th 45th 46th and 50th mile. | In bad order, and requiring repair, 18 miles. |

10th 12th 13th 31st 34th 35th and 37th mile.

6. Colonel Boileau states that repairs are required more or less throughout this line, the portions noted in the margin excepted, and Captain Moberly will accordingly be furnished with an extract from the Deputy Chief Engineer's Diary with a view to early measures being adopted for their early execution.

7. Colonel Boileau did not find the traffic on this portion of Trunk Road No. 1 so heavy as he expected; and as it has been represented 100 carts a day were as many as he saw passing over any one mile, and he considers the annual allowance (Rupees 25,000) sufficient to bring the road into order and then to maintain it, Colonel Boileau strongly recommends that an Overseer trained in the old Road Department should be appointed to the charge of the road; and as both Mr. Overseer Wakefield and Mr. Assistant Overseer Franklin attached to the Madras District are peculiarly fitted for this duty, the former from his long experience in the late Road Department, and the latter in the late 8th Division, where he was employed on the Cotton roads in Tinnevelly, Captain Moberly will be requested to entrust either of them with the charge on Mr. Lee's return at the end of the current month from the leave on Medical Certificate granted to him in December 1860, and which he availed himself of on the 1st May last.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 107. ORDER THEREON, 8th November 1861, No. 2,070.

1. The Government approve of the orders issued by the Chief Engineer.

2. Colonel Boileau states that the maintenance allowance for the road is ample to bring it into good order and to maintain it, and the Government expect this to be done for the future. The use of earth in the repairs in North Arcot must be peremptorily forbidden, and the District Engineer of Madras should be warned that Government hold him responsible for the conduct of his Subordinates. It is not creditable to him that with sufficient funds at his command, 18 out of 54 miles of an important road should be found "in bad order."

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 108. Read the following Endorsement of the Chief Engineer, dated Chepauk, 30th October 1861, No. 6,603 :—

Read the following letter from Captain G. W. WALKER District Engineer, North Canara, to Lieutenant-Colonel F. H. RUNDALL, for Deputy Chief Engineer, Central Circle, dated Bellikeny, 18th October 1861, No. 131.

SIR,

1. Having this day received your Order No. 5,841, of 11th instant, with its enclosures, I have the honor to report further on the subject of Beitkál Harbour and its approach by the Kaiga Ghát.

2. The pier, as you are aware, is not even sanctioned. A sum of Rupees 28,000 is however available for the construction of one, and Rupees 10,000 are sanctioned in addition for a wharf road round the cove to render such pier accessible. That wharf road is the first

thing to be undertaken when I am joined by an Executive Assistant competent to manage the work. I have already applied to the Collector to be put in possession of the necessary ground. In my opinion the wharf road is all that should be attempted this working season, timber for piling and other requisites for a pier having yet to be collected and its very design not yet agreed on. Another reason will appear further on.

3. I have not the slightest hesitation in saying that had Mr. Merrall done his duty, the Kaiga line would have been open to twelve feet width throughout to Mullapoor as a dry weather cart road by April 1861. Or had I been able to take up the work for him, as was my intention last Feburary, I could still have retrieved our credit in this matter. Bad quality and short allowance of superintendence, are the causes of our backwardness with the Kaiga works. I now reckon on opening a twelve-feet cart road to Mullapoor, the head of the river navigation by 1st January 1862, which will virtually enable the Cotton trade to, make use of the Port. By April next, a twelve-feet road will be passable by carts down to Beitkál itself.

4. In the infancy of the Port, and while it is yet unprovided with wharfs, piers, and other shipping conveniences, it is my impression that the river will be largely availed of to carry goods from Mullapoor alongside the shipping in Beitkál Bay. Indeed I think this procedure will obtain very much even after every accommodation has been provided for shipping at Beitkál, especially amongst Native merchants. I deprecate therefore any ill-considered meddling with the Harbour this season, and desire to be allowed chiefly to confine my attention to the formation of a road round it, and to the organization of Workshops. As before stated, I can engage to have a twelve-feet road opened all the way to Beitkál by April next, but I would much rather open to eighteen feet width only to Mullapoor, if permitted, with a bridle-path the rest of the way.

5. On the preparation of surveys and estimates I have already reported in my letter No. 126, of 15th instant, as well as on the amount that we may probably be able to lay out this season. But in connexion with the subject of the Kaiga road, I have the honor, a third time, to call your attention to the propriety of continuing the line already in progress from Bankapoor to the North Canara frontier under the Bombay Public Works Department. It must be extended at once to Merudagodes to make it of any use, as pointed out in my letters No. 9, of 26th May and No. 51 of 27th June 1861.

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P. S.—I have further to add that unless Government undertake to procure for European capitalists the ground they require, in the same manner in which ground is taken up for public purposes, neither the Manchester Cotton Supply Company, nor any other private firms will be in a position to avail themselves of a road to the port of Beitkál this season; so great are the difficulties of inducing private individuals to part with their land, and so little useful land is there exclusively the property of Government. Whether Government would be justified in thus acting for the benefit of Cotton Merchants is a question for others to decide. But the obstacle now existing to the erection of Stores, screw presses, &c., on eligible sites at Beitkál, should operate in causing a general resort to the river; and is another argument in favor of pushing the works between the Cotton-producing country and Mullapoor, at the expense of the road further westward, and even of the harbour itself.

1 Original letter.

1. Submitted for the information of Government in continuation of the Chief Engineer's Endorsement on the letter from the District Engineer North Canara, dated 15th October 1861, No. 126.

2. The Government will observe that Captain Walker is of opinion that the Wharf road is all that should be attempted this working season, as all the materials for the pier have yet to be collected and its actual design is not yet decided.

3. He ascribes the small progress made on the Kaiga road to defective superintendence, and considers that it ought to have been opened to 12-feet width throughout to Mullapoor by 30th April last, but he hopes to have it open as a 12-feet card road by 1st January next as far

as that place which is the head of the river navigation, and that this will virtually enable the Cotton trade to make use of the Port; but that a 12-feet road will be available all the way to Beitkâl itself by 30th April 1862.

4. The Government will observe how far the superintendence at the District Engineer's disposal was defective.

Mr. Merrall, Civil Engineer, was at Beitkâl.

Lieutenant Fraser, Engineers, at Kaiga Ghát.

Mr. Powell, Acting 1st Assistant District Engineer.

Lieutenant Stewart, Engineers, Acting 2nd Assistant District Engineer, being two Officers in excess of the authorized allotment.

Mr. Fernandez, Overseer.

5. Captain Walker has found great fault with Mr. Merrall, but though that gentleman has certainly not performed the duties of the Range satisfactorily, yet I am of opinion he was fully qualified to carry out the Pier and Workshops, the duty for which he was more especially sent* to North Canara, and it is but due to Mr. Merrall to add that the Officers under whom he previously served in the Kistna District did not make similar complaints against him.

* 31st July 1860, No. 1,628.

6. Captain Walker requests that he may be allowed to confine his attention to the formation of a road round the Harbour, and to the organization of Workshops, as though the 12-feet road from the Ghát to Beitkál itself may be opened by April 1862, yet he would prefer making a road 18 feet wide to Mullapoor only with a bridle-path the rest of the way; for, as he truly observes, that if goods are shipped at Mullapoor they will from thence be taken straight to the shipping, and not need the accommodation of a Pier or Wharves.

7. The continuation of the line from Bunkapoor to the frontier, the Government will observe, lies within the Bombay territory, and is the same portion of road mentioned in the Chief Engineer's letter of the 25th March 1861, No. 11,325, as one on which the convict labor of that Presidency might be profitably employed.

8. As doubtless these proposals were all laid before His Excellency the Governor during his late visit, the Chief Engineer concludes that the requisite orders thereon will be communicated in due course.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 109. ORDER THEREON, 8th November 1861, No. 2,071.

1. In their Order of the 29th ultimo, No. 2,002, the Government have specified the works to be immediately undertaken at Beitkál.

2. Captain Walker should be requested to report without delay on the improvements effected by the Bombay Government to the road from Iddagungy eastwards to Hoobly, under the arrangement assented to in Government Order, 27th March last, No. 630.

3. The Government have lately appointed to the North Canara District, Mr. Boesinger and Captain Searle, and the Chief Engineer has appointed another Overseer for the 5th Executive Range, so that when these Officers join, Captain Walker will have all the assistance he has sought. Of labor and funds he has reported that he has a sufficiency.

4. As to whether a 12-feet road should be opened all the way to Beitkál or an 18-feet one as far as Mullapoor with a bridle-path on to Beitkál, the Government are decidedly of opinion that the road should be completed at once to Beitkál and not stop short of that place. The appointment of Captain Searle to aid Lieutenant Fraser will perhaps admit of the road being made 18 feet the whole way to Beitkál, and if this can be done so much the better; but a mere bridle-path between Mullapoor and Beitkál is out of the question.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 110. Read the following Proceedings of the Madras Government in the Judicial Department, dated 4th November 1861, No. 1,337:—

Sanctioning the sale of the materials of the Sebundy Barracks at Pálcondah, or the land with the materials standing on it under the freehold rules. } (Vide Judicial Proceedings, 4th November 1861, Nos. 7-8.)

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No. 111. ORDER THEREON, 8th November 1861, No. 2,072.

Communicated to the Chief Engineer, with reference to his Endorsement, dated 17th October 1861, No. 6,025.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

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No. 112. Read the following Proceedings of the Madras Government in the Judicial Department, dated 4th November 1861, No. 1,339:—

Requiring that village Officers should guard the works of Irrigation, &c., within their limits in ordinary cases, but in others, extra watchers may be temporarily entertained. } (Vide Judicial Proceedings, 4th November 1861, Nos. 11 @ 13.)

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No. 113. ORDER THEREON, 8th November 1861, No. 2,073.

Communicated to the Chief Engineer for his information and guidance.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 114. Read the following Proceedings of the Board of Revenue, dated 31st October 1861, No. 5,957.

Read the following letter from V. H. LEVINGE, Esq., Collector of Madura, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Chepauk, dated 30th September 1861, No. 246:—

SIR,

1. With reference to the Board's Circular, No. 1,635, dated 28th March 1861, I have the honor to report that there are two main lines of Cotton road in this District; one from Aripucotta in the Rámnad Zemindari to Tutacorin in Tinnevelly, which road has been made throughout, and is in good order, only requiring slight repairs here and there.

2. The other line is from Pulny by Pulkanooth, Nellacotta, through the Panyan pass to Tirumungalum, at which place it joins No. 4 high road.

3. From Pulny to Pulkanooth, the road has been partially made, but it is still very bad in places.

4. From Pulkanooth to the Panyan pass nothing has ever been done to the road that I am aware of; it is one of the most important roads in the District, and requires carefully being looked over by the Public Works Department, to ascertain which line would be the best to select for repair or making, as there are three ways of reaching the pass from Pulkanooth.

5. From the Panyan pass to Tirumungalum the road has been made in places which have not been kept in repair; and other parts of the road are very bad.

6. No. 4 road from Tirumungalum down to the border of the Tinnevelly District, is in places where it passes through Cotton soil, nearly impassable after rain. An estimate has been long sanctioned for the completion of this road, and work is now going on upon it.

7. A portion of the Local Fund of the District at present undisbursed might be advantageously expended in at once improving the road between Pulny and the Panyan pass.

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In Cons., 20th March 1861, No. 1,756.

1. Ordered to be submitted for the information of Government, with reference to their Proceedings, dated 19th March 1861, No. 638.

2. The Board fully concur with Mr. Levinge in his opinion of the advantages likely to be derived from the repairs of the roads mentioned by him, and recommend that the works be prosecuted as speedily as funds can be provided.

3. The Collector will please to state more fully what amount of the Local Funds is available for this work, and whether he includes in his available funds the amount formerly set aside or subscribed by the residents for the execution of the water-project, and for the drains and Lying-in-Hospital.

(A true Copy and Extract.)

(Signed) W. HUDLESTON,
*Secretary.*

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No. 115. ORDER THEREON, 8th November 1861, No. 2,074.

Forwarded to the Chief Engineer for consideration in his allotment of the additional funds promised by the Supreme Government in their Proceedings of the 9th October 1861, No. 90, communicated with the Proceedings of this Government of 29th idem, No. 2,003.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 116. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 23rd October 1861, No. 49 :—

SIR,

1. With the accompanying letter* the Agent submits plans and estimates together with an explanatory description from the Chief Engineer for an Office, Store Rooms, and Artificer's shed at Bowanasi.

* No. 423 of 24th September 1861.

2. These buildings the Chief Engineer explains were commenced last year under the general sanction† for commencing preliminary operations.

† Proceedings of Government, No. 2,500, dated 24th October 1859.

3. The estimates amounting to Rupees 7,297-8-5, show the entire cost of the buildings, but sanction is now only asked for Rupees 1,895, the amount required for their completion.

4. The site is near the mountain stream Bowanasi the village of Kumbulpilly through which the Main Canal passes, and immediately above the deep cutting by which the Canal passes through the watershed to the head of the Kundár Valley.

5. It is centrically situated, for the Bowanasi Division is on the high road from Kurnool to Guntoor through the Dorenal Pass, and will be an important Canal station.

6. The main building contains two rooms for the Executive Engineer's Office, clerks and draughtsmen; an Accountant's Office with Treasury; a Store Room and Store-keeper's Office. The other building is an open shed for carpenters and smiths

7. The whole is to be constructed of stone in chunam. The timber is brought from the Nullamallay Hills. The prices in the estimate are those which were actually paid; that for the timber is high, but the rates since established are lower and are well in the estimate for the completion of the buildings.

8. The roof as at present constructed is thatched, but the wood-work is sufficiently strong to support tiles which may at a future time be substituted.

9. With the exception of the Treasury, the situation of which does not appear secure, the buildings are adapted for the purpose required; and I beg that the sum of Rupees 1,895, may be sanctioned. As remarked by the Chief Engineer this will be an important station, situated at the head of the Bowanasi Valley the whole of which will be brought under irrigation by the Canal.

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No. 117. ORDER THEREON, 9th November 1861, No. 2,075.

Sanction is granted for the completion of the Irrigation Company's Office, &c., at Bowanasi at the estimated cost of Rupees (1,895) one thousand eight hundred and ninety-five, but arrangements should be made to ensure the greater security of the Treasury room.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 118. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th October 1861, No. 6,494:—

SIR,

One original letter from the District Engineer North Arcot, dated 28th September 1861, No. 703—to be returned.

1. I have the honor to bring to the notice of Government that there are two works entered in the printed Budget of the current official year, which are not necessary to be executed for reasons stated below.

Item No. 161, road from Púttur Station to Pullipet, Rupees 3,000.

2. In Proceedings of Government, dated 17th July 1860, No. 1,526, the construction of the work marginally noted was approved of by Government, and in the current year's Budget, it is entered with the full amount of the estimate allowed for expenditure. The District Engineer, in his letter of the 28th September 1861, No. 703, states that this was one of the roads the Collector considered of much importance, and as there was a large accumulation of local funds in the latter end of 1859 remaining unspent, a road to connect Pullipet with the road between Naggari and Kurkumbaddi at a point near the Station of Púttur, was constructed, and therefore the amount allowed in the Budget is not required for expenditure on that work.

Item No. 162, road from Kurkumbaddi Station to Kalastri, Rupees 6,750.

3. This work was approved of in Proceedings of Government, dated 17th July 1860, No. 1,526; but the Deputy Consulting Engineer for Railways, in a letter to Government, dated 12th September 1860, No. 171, applied for the cancelment of the sanction accorded to this work, as he proposed another road being formed from the Tripati Station to Kalastri in lieu of it. In Proceedings, dated 26th September 1860, No. 2,002, Government called for estimates for the new road proposed as well as for the road to connect the Tripati Station with Tripati to the west, which were sanctioned in their Proceedings, dated 6th May 1861, No. 898. Thus, it will be seen that the entire amount of the estimate for the above road which is allowed in the Budget for expenditure in the current official year is not required.

| | |
|---|---|
| | RS. |
| * | 3,000 |
| | 6,750 |
| Total.. | 9,750 |

4. I have therefore the honor to request that the Government will be pleased to authorize the two amounts* named above to be transferred to the reserve fund for the current year to be expended on remunerative works either in North Arcot or in any other District where additional funds may be required, Government having already in their Proceedings No. 1,928, dated 21st October 1861, granted a sum of Rupees 15,320 for the completion of the works connected with the Pálár project from the reserve fund.

No. 119. ORDER THEREON, 9th November 1861, No. 2,076.

The Chief Engineer's proposals are approved.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 120. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 14th October 1861, No. 5,868:—

SIR,

1 Letter from the District Engineer South Canara, dated 19th August 1861, No. 87.
1 Do. from District Engineer Trichnopoly, dated 28th October 1858, No. 1,169, with one enclosure.
1 Do. from do., dated 28th September 1861, No. 895, with one enclosure.

1. Adverting to the explanation furnished by Colonel Birdwood in list of bills dated 12th July 1861, No. 2,623, relative to the excess of 22½ per cent. over the estimate in the expenditure on improvements executed to the Cavalry Hospital at Trichinopoly, I have the honor to correct a statement therein made to the effect that the addition of a front Verandah to the above building was not reported to the Central Office by Captain F. J. Moberly. On the receipt of the accompanying letter from that Officer, it was ascertained that the circumstance was duly reported on the 28th October 1858, and that the additional work was sanctioned by this Office, but on the distinct understanding that it did not cause an excess of more than 5 per cent. on the estimate. As already explained in Colonel Birdwood's list of bills above quoted, the rise in the price of materials and labor prevented this being done. It was, therefore, Captain Moberly's duty, as the authority for the addition was only conditional, to have reported the probability of excess over the estimate in order that the sanction of Government might be obtained for the increased outlay.

19th August 1861, No. 87.

5th November 1858, No. 5,115.

2. Referring to the remark of Government in paragraph 2 of Proceedings dated 6th August 1861, No. 1,473, to the effect that Captain Moberly "volunteered the execution of the Verandah," it will be seen from the copy of correspondence accompanying Captain Palmer's letter, dated 28th ultimo, No. 895, that the addition was suggested by the Officer Commanding 1st Cavalry, and that the matter was referred by the General Commanding the Division to the District Engineer, who in reply remarked that the advisability of the addition had suggested itself to him; and that he hoped to carry out the same "without exceeding the estimate, or at so small an extra cost, "that the Chief Engineer will be able to sanction it without reference to higher authority."

No. 121. ORDER THEREON, 9th November 1861, No. 2,077.

The Order of the 6th August last was passed on the information laid before Government by Colonel Birdwood. It now appears that the addition of the Verandah was reported by Captain Moberly and sanctioned by the Central Office; so far therefore Captain Moberly is free from blame; but as the sanction was conditional on the additional expense not exceeding 5 per cent. he was wrong in not reporting that the excess would be, as it proved, much greater.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 122. Read the following Endorsement of the Deputy Consulting Engineer for Railways in charge, dated Madras, 26th October 1861 :—

Read the following letter from WILLIAM S. BETTS, Esq., Agent Great Southern of India Railway, to Consulting Engineer for Railways, dated Negapatam, 23rd October 1861, No. 230 :—

SIR,

I have been informed that His Excellency the Governor has recorded a Minute upon the improvement of the Harbour at Negapatam, as this is a question of great moment to the Company I represent, I shall feel obliged by your handing me a copy of the Minute at your early convenience.

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1. Forwarded for the orders of Government.

2. The Minute referred to by the Agent, does not appear to have been communicated to this Office.

(Signed) P. P. L. O'CONNELL, Captain,
*Deputy Consulting Engineer for Railways in charge.*

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No. 123. ORDER THEREON, 9th November 1861, No. 2,078.

The Order of Government, dated 26th September 1861, No. 1,785, will be communicated to the Consulting Engineer, in view to his furnishing the Agent, Great Southern India Railway, with a copy thereof.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 124. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 25th October 1861, No. 6,401 :—

1 Letter from District Engineer Bellary, No. 330, dated 26th January 1859, with one Survey, one Report and one letter from Mr. Pelly, Collector of Bellary, No. 4, dated 14th January 1859.
1 Letter from the District Engineer Bellary, No. 382, dated 15th February 1861, with one copy of letter from Mr. Hathaway, Collector of Bellary, No. 35, dated 11th February 1861.
1 Letter from District Engineer Bellary, No. 197, dated 9th August 1861.
1 Do. No. 210, dated 15th August 1861.
1 Abstract estimate.
1 Plan and sections of Aqueducts, &c.
1 Proceedings of the Board of Revenue, No. 3,127, dated 15th June 1861.

SIR,

1. I have the honor to forward herewith an estimate amounting to Rupees 14,440 for widening and extending the Hora Calvá, at Siragúpa, from the river Tumbaddra in the Bellary Táluq of the District of that name.

26th January 1859, No. 330.

2. The project has met with the approval of Mr. Pelly, the late, and of Mr. Hathaway the present Collector of Bellary. The former Officer entertained some doubts about the water supply being sufficient; but the District Engineer having had occasion, when reporting on the proposed new channel from the Tumbaddra river to Bellary, to calculate the discharge of that river throughout the year, is perfectly satisfied on that point, remarking that the quantity of water passing down it for six months in the year is enough for one crop on a million acres!

11th February 1861, No. 35, with District Engineer's letter, 15th February 1861, No. 382.

| | Acres. |
|---|---|
| Sirkár | 1,506 |
| Inám | 352 |
| | 1,858 |

15th February 1861, No. 382.

3. Mr. Hathaway expects that by carrying out the proposed improvements, *extra* dry land to the extent of 1,858 acres will be available for wet cultivation and yield a revenue of Rupees 9,290, and he reports that the Ryots of Siragúpa and the neighbouring villages have given written agreements to cultivate the above area. In addition to this, however, Captain Fisher reports that there is a large extent of land on the left bank of the Huggri river which will no doubt eventually be irrigated, but it is not considered advisable at present to enter it among the calculations of extra cultivation and revenue; the section to be given to

the channel is, however, sufficient to supply water for 3,000 acres, or 1,142 more than it is immediately contemplated to take up. Captain Fisher believes also that a revenue will be derived from a *second* crop, inasmuch as there will be water in the channel for ten months in the year, and his opinion is that an increase of from 12,000 to Rupees 15,000, rather than 9,290 Rupees will be realized by the execution of the project.

4. On these points the District Engineer may be too sanguine; at any rate it is well to abide by the Collector's estimate of increased revenue,* which of itself is nearly 66 per cent. upon the proposed outlay.

* Rupees 9,290.

5. The present cultivation under the channel is given in Mr. Pelly's letter to the District Engineer, dated 14th January 1859, No. 4, at acres 1,576, yielding a return of about 18,000 Rupees.

4th May 1861, No. 183. Proceedings Revenue Board, 15th June No. 3,127.

6. In accordance with paragraph 35 of Chapter V of the new Code, I referred the project for the opinion of the Board of Revenue, who it will be observed strongly recommend the execution of the same.

15th February 1861, No. 382, paragraph 2.

7. Though the estimate was framed in 1859, the District Engineer is of opinion that it will be sufficient, and is not liable to be affected in the same manner as estimates for works in the town of Bellary, by any great demands on the local market.

8. The course to be given to the extended channel is exhibited in the accompanying survey sketch, and the details of the project are set forth in the enclosed report.

9. The present head sluice will have two additional vents given to it, eight branch Sluices will be constructed, and eight Aqueducts, the principal of which are, No. 1, which passes a large jungle stream over the new channels, and No. 8, which takes the channel across a similar stream by a work of three arches each of 18 feet span.

10. As the project promises to prove highly remunerative, and as consequent upon the non-purchase of Colonel Whistler's house, and the fact of provision having to be made for only one Company of Artillery at Bellary in lieu of a Troop and a Company, ample funds are at the disposal of the District Engineer Bellary. I beg to recommend this work for early sanction, 7,440 Rupees being disbursed this year, and the remaining 7,000 being entered in the Budget of 1862-63.

11. The estimate has been examined in this Office and found correct.

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No. 125. ORDER THEREON, 11th November 1861, No. 2,079.

1. Sanctioned.

2. The Chief Engineer will make timely arrangement for the profitable employment in Bellary or elsewhere, of the ample funds stated to be at the District Engineer's disposal.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 126. Read the following Endorsement of the Chief Engineer, dated Chepauk, 31st October 1861, No. 6,702.

Read the following letter from Captain T. E. GAHAGAN, District Engineer of Salem, to Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Salem, 30th August 1861, No. 109:—

SIR,

1. I have the honor to apply for additional grant of Rupees (405) four hundred and five, for maintaining the road between the Town and Station at Salem during the current year, as the allowance of 300 Rupees per mile sanctioned in Extract Minutes Consultation, No. 2,606, of the

19th December 1860, is at present insufficient owing to the amount of traffic which has been on the road ever since it was opened to the public on the 1st January last, and to the dearness of metal which has to be carted some distance.

2. When the embankment which carries the road for two miles out of two and a quarter, is a year or two older, and has become thoroughly *consolidated*, the original allowance of 300 Rupees may perhaps be sufficient.

3. A traffic Return is enclosed.

4. The grant for which I am now asking can be taken from the unappropriated sum of Rupees 4,917 included in Budget Statement No. 3 of 1861-62, for repairs of communications in this District, as up to this date only 1,300 Rupees* of that sum have been applied to a specific object.

* Extract Minutes Consultation No. 1,460, of 3rd August 1861, extra allowance sanctioned for 13 miles of Salem and Coimbatore road.

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SOUTHERN CIRCLE, PUBLIC WORKS DEPARTMENT.

*Salem District.*

Return of Traffic on the Road between the Town and the Railway Station at Salem, taken during the third week in the month of August 1861.

| Place at which the Return is taken. | Daily average in 12 hours. | | Remarks. |
|---|---|---|---|
| | Carts. | Bullocks. | |
| Railway Station Gate. | 407 | 47 | This Return shows the average daily traffic between 6 A.M., and 6 P.M.; but also between 5 and 6 A.M., and 6 and 8 P.M., there is a considerable amount of traffic in connection with the early and late Goods Trains. From personal observations I believe the cart traffic to be nearly 600 carts per diem. |

District Engineer's Office, Salem,
29th August 1861.

(Signed) T. E. GAHAGAN, Captain,
*District Engineer.*

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1. Submitted for the consideration of Government with the recommendation of the Chief Engineer that the additional amount, viz., Rupees 405, applied for by the District Engineer, may be sanctioned from the available balance† of the allotment in the Budget for the current official year, for "roads not provided with special grants," as the sum‡ sanctioned in Proceedings of Government, No. 2,606, dated 19th December 1860, is insufficient for the maintenance of the road between the Town and the Railway Station at Salem, owing to the heavy* traffic thereon.

† Rupees 1,967.

‡ Rupees 675.

* Average 407 Carts and 47 Bullocks per diem. But from personal observation the District Engineer believes the Cart traffic to be nearly 600 per day.

2. The length of the road is $2\frac{1}{4}$ miles.

3. A Traffic Return is also enclosed.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

No. 127. ORDER THEREON, 11th November 1861, No. 2,080.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 128. Read the following Proceedings of the Board of Revenue, dated 22nd October 1861, No. 5,809.

Read the following letter from V. H. LEVINGE, Esq., Collector of Madura, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Chepauk, dated 11th October 1861, No. 258 :—

SIR,

To Board, dated 20th April 1861, No. 116.
From do. 25th ,, ,, ,, 2,157.
From do. 22nd May ,, ,, 2,614.
From do. 21st June ,, ,, 3,241.
Communicating the Order of Government, dated 19th June 1861, No. 1,129.

1. With reference to the marginal correspondence, I have the honor to request the Board will recommend the employment of an Officer to trace the proposed new Ghât from Cumbam to Godalore Tavalam. I have had an interview with Captain Ryves, the District Engineer, who has just returned from inspecting the locality ; he informs me that an Officer must be specially deputed for the execution of the required works, and recommends the employment of Lieutenant Mead, of the Corps of Engineers, at present employed in Trichinopoly.

2. Captain Ryves is of opinion that an Officer could mark out a correct trace in six weeks for a sum of 5 or 600 Rupees ; that within a month from the date of commencement, the regular work could go on ; and that a bandy Ghât with a gradient of 1 foot in 18 would cost 7,000 Rupees ; that a Bullock track, same gradient, would cost 1,000 Rupees ; which might be completed in three months.

3. As the Board are well aware of the importance of this proposed new Ghât, I beg they will urge the appointment of an Officer to construct it.

4. To provide funds for the construction of a bandy road is, I find, rather difficult ; but considering the benefit expected and the fact that the Travancore Government are making a bandy road on their side, it is necessary that ours should correspond with theirs.

5. I could at once give 600 Rupees to make the trace from the local funds, and 1,000 Rupees for making the Bullock path, could be furnished from the sum of 27,000 Rupees and odd allotted to the District for expenditure on roads not provided with special grants.

6. But a bandy road is essential, and its cost is as nothing compared with the benefit it will confer.

7. At present there is a sum of 7,726 Rupees in deposit, a portion of the surplus Devastanum fund, which was allotted for the Madura water project; this sum would be insufficient to complete the water project, and beside it, no other funds are available to furnish that work ; it is a work for the completion of which Government cannot be expected to find funds, and the towns people will not give any thing towards it, from a feeling that by it water cannot be brought into the town, in consequence of an error in the level, also on account of there being no permanent supply of water in the Vyga ; this sum is therefore lost to all at present, and likely to remain useless as long as it is credited to the water project. I beg, therefore, that it may be devoted to constructing the Ghât ; if at any time it is wanted for the water project, it can be made good by instalments from the local funds and the road fund above alluded to.

8. If the Board are not inclined to recommend the utilizing of the above sum in the manner now pointed out, I beg that the sum of Rupees 2,227-1-3, collections on account of cattle fines under Act III of 1857, which have accrued between May 1861 and September 1861, may be sanctioned to be expended in making the Ghát to be supplemented with the necessary amount from the 27,000 Rupees fund.

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Ordered to be submitted to Government, with reference to their Proceedings quoted by the Collector, and with the Board's recommendation, that if available, Lieutenant Mead be placed at Captain Ryves' disposal for employment on the work in question, and that the small sum estimated to be required, be allotted for this work from such source as Government may think fit. The work is scarcely one of which the expense should be borne by the local fund, but the Board attach so much importance to its speedy execution, that if other funds are not available they would recommend the adoption of the Collector's proposal to employ on this work the surplus Pagoda funds assigned for the Madura water supply project, which does not seem likely to be ever carried out.

(A true Copy and Extract.)

(Signed) W. HUDLESTON,
*Secretary.*

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No. 129. ORDER THEREON, 11th November 1861, No. 2,081.

These Proceedings will be forwarded to the Chief Engineer, through whom they should have reached Government. If the Chief Engineer approves of the proposed arrangements, the trace can be executed at once at the expense of the local fund, and an estimate prepared for the construction of a cart road corresponding with that now being formed by the Travancore Government.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 130. Read the following Endorsement of the Chief Engineer, dated Chepauk, 7th November 1861, No. 6,929.

Read the following letter from Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, to Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, dated Chepauk, 4th November 1861 :—

SIR,

I have the honor to inform you that the remark which I made in the Diary of my recent tour to the effect that " the Sepoy of the Bungalow (at *Vaniembády*) that he had not been paid " for five months," should have run " the sepoy of the Bungalow at *Ambur*, &c.," and I request you will have the goodness to cause the error in the original report to be corrected.

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1 Original letter.

Submitted for the information of Government with reference to paragraph 2 of their Proceedings, No. 2,007, dated 30th ultimo, with a request that the error pointed out by Colonel Boileau in the Diary of his recent tour may be duly corrected.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

No. 131. ORDER THEREON, 11th November 1861, No. 2,082.

Communicated to the Board of Revenue, with reference to paragraph 2 of Government Order, 30th October 1861, No. 2,007.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 132. Read the following Endorsement of the Chief Engineer, dated Chepauk, 26th July 1861, No. 3,176:—

Read the following letter from Captain G. W. WALKER, District Engineer, North Canara, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Sircy, 8th July 1861, No. 61.

SIR,

I have the honor to report more fully on the subject of your Telegram of the 28th June replied to by me in Telegram of the 30th idem, that I have this day received from Mr. Müller, Assistant Conservator of Forests, the following information respecting the wood proposed to be used for the Piles of the Beitkál Pier.

1. "There is only one kind of jungle wood which stands well in and out of water, which "is not eaten up, and which combines strength. Others there are which though they stand the "action of the water, and even get better in it, are too weak and open grained, and would never "do to bear the weight which the Pier will have to bear."

2. "The name of the good kind is in Canarese Jambolee, in Hindustani Jamoon; "Botanical name is Syzygúm Jambolanum; Botanists, however, differing as to names. Refer "to Major Drury's "Useful Plants of India," page 421, No. 604, to identify it."

"*General description of the wood.*

3. "It is very close grained, and therefore tremendously heavy. It grows large, but is "not very plentiful in our jungles. The expense of bringing it to the coast will be very high "as the trees are only found widely dispersed in the jungles. Natives, whenever they can get "this wood, use it in preference to any other in tidal waters on river banks, and I have seen "very old wood, under the action of water, which is still quite sound."

*P. S.*—Mr. Müller states in a futher communication that the above mentioned wood will cost 12 Annas per cubic foot in the rough at Sedasheghur; second class Teakwood (such as *might* do for Piles) Rupees $1\frac{1}{2}$ per cubic foot unwrought, and first Class Teak, Rupees 2.

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Submitted to Government in continuation of a letter from this Office, No. 2,455 dated 6th July 1861, and especially with reference to paragraph 9 of the same.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 133. ORDER THEREON, 11th November 1861, No. 2,083.

To be recorded, with reference to Government Order 26th October 1861, No. 1,979.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 134. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 24th October 1861, No. 6,330 :—

*Progress Report of works in the District of North Canara, for August 1861.*

| Description of work. | Amount of Estimate. | By whom sanctioned, and number and date of sanction. | Date of commencement of work. | Net amount expended up to the end of previous years. | Recoveries in this year of expenditure appertaining to previous years. | No. of item in the Budget of the current year and the amount authorized in it. | Expenditure in this year. In this month. | Expenditure in this year. Up to this month. | Recoveries of expenditure in this year. In this month. | Recoveries of expenditure in this year. Up to this month. | Net expenditure in this year. | Bills submitted up to this month. | Balance of expenditure in this year remaining unaccounted for. | Remarks regarding date of commencement, state of progress, &c. &c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | RS. | | | RS. A. P. | RS. A. P. | RS. | RS. A. P. | RS. A. P. | RS. A. P. | RS. A. P. | RS. A. P. | RS. A. P. | RS. A. P. | |
| NEW WORKS. | | | | | | | | | | | | | | |
| COMMUNICATIONS. | | | | | | | | | | | | | | |
| Constructing a new road from Yellapúr to Beitkál viâ the Kaiga Ghát. | 95,330 | Govt. No. 2,250 1-11-60. | 1-3-61. | ...... | ...... | 22 30,000 | 967 4 7 | 4,464 8 0 | ...... | ...... | 4,464 8 0 | ...... | 4,464 8 0 | 6¼ miles of new trace have been laid out between Wulliontay and Vasloo and a party of 205 men are opening it to bridle-path. |
| Pier at Beitkál Bay ...... | 51,000 | 856 25-4-60. | ...... | ...... | ...... | 96 28,000 | | 600 0 0 | ...... | ...... | 600 0 0 | ...... | 600 0 0 | No progress. Mr. Morrall's time is occupied in surveying. |

SIR,

1. With reference to paragraph 4 of the Proceedings of Government, No. 1,818, dated 1st instant, I have the honor to forward extracts from the most recent Progress Report of works received from North Canara, from which it will be seen that 6¼ miles of new trace have been laid out on the line of road from Yellapúr to Beitkál viâ the Kaiga Ghát, and a party of 205 men are opening it as a bridle-path. The expenditure to 31st August amounted to Rs. 4,464-8-0.

2. No progress has been made on the Pier work at Beitkál Bay pending the sanction of Government to the plan and estimate submitted with letter No. 2,455, dated 6th July 1861.

3. Captain Walker has been called upon to furnish detailed information on the several points noticed in the above Proceedings, as well as in those of the 10th instant, No. 1,878. These will be communicated immediately after their receipt.

No. 135. ORDER THEREON, 11th November 1861, No. 2,084.

The Government will await the further communication promised by the Chief Engineer.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 136. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd November 1861, No. 6,772:—

SIR,

In acknowledging receipt of the Proceedings of Government, No. 1,960, dated 25th October 1861, on the subject of amalgamating the Military Orphan Asylums at Madras with the Lawrence Asylum at Ootacamund, and calling for the necessary plans and estimates for carrying it into effect, I have the honor to request that you will be good enough to let me know whether provision for the same is to be made in the Public Works Budget for 1862-63, or in that of the Director of Public Instruction.

No. 137. ORDER THEREON, 11th November 1861, No. 2,085.

Referred to the Educational Department with reference to the Order in that Department, dated 16th October 1861, No. 39.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 138. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th October 1861, No. 6,081:—

SIR,

1. I have the honor to forward for the consideration and orders of Government the accompanying Memorandum from the Officiating Civil Paymaster, enquiring whether Mr. Longley, the Mechanical Engineer specially sent from England to set up the iron Steam Tug intended for the Paumben Channel, is entitled to the "*extra pay*" claimed by him for the months of June, July and August last.

1 Memorandum from Civil Paymaster, with five enclosures.
1 Letter from District Engineer Godavery, with two enclosures, dated 2nd August 1861, No. 449.

2. The amount claimed by Mr. Longley are as follows:—

| | RS. | A. | P. |
|---|---|---|---|
| For working seven days and one hour in excess of seven hours per day, during the month of June 1861, at Rupees 250 per month | 59 | 8 | 4 |
| For working seven days and three hours in excess of do., during the month of July, at do. | 59 | 14 | 3 |
| For working seven days and five hours in excess of do., during the month of August, at do. | 62 | 3 | 1 |
| Total | 181 | 9 | 8 |

3. With a view of arriving at a decision in the matter, the District Engineer Godavery was requested in Extract Proceedings, No. 5,129, dated 21st September 1861, to forward a

copy of Mr. Longley's Covenant, but from this document, which was received with Major Stoddard's letter, No. 449, dated 2nd instant, it is observed that no mention is made of extra pay or of the number of hours per day during which Mr. Longley is to be engaged at his work.

4. In the cases of the other Mechanical Engineers attached to the Department of Public Works of this Presidency, who belong to the Indian Navy, it has been ruled* that whenever required to work beyond factory hours (viz., from 9 A.M., to 4 P.M.,) they should be allowed extra pay at the rate† noted in the margin, and I am therefore of opinion that although no special provision to this effect has been made in Mr. Longley's Covenant, yet that he is entitled to the same consideration, and I have therefore to request that the Civil Paymaster may be authorized to pass the bills alluded to above, as well as those which may be submitted for future months.

* See Proceedings of Government, No. 1,659, dated 8th July 1859.

† One day's pay for every seven hours of extra work.

5. In conclusion, I would beg to add that the District Engineer Godavery having been requested to inform Mr. Moncrieff that as Mr. Longley's employment during extra hours entails additional expense upon the State, it should not be permitted unless in really urgent cases, that Officer has forwarded the accompanying letter from the Superintendent Government Workshops at Dowlaishwaram, intimating that as the Artificers are engaged for ten hours each day, it is essentially necessary that Mr. Longley should be present, with a view of guiding them in their work and keeping them to their duties, and in this opinion I fully concur.

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No. 139. ORDER THEREON, 11th November 1861, No. 2,086.

1. The Governor in Council observes that extra pay for extra hours is not usual in the Department of Public Works. It is granted to certain Covenanted Mechanical Engineers, simply because they belong to the Indian Navy, and have had the rules and regulations of that service applied to them; but that is no reason why the practice should be made general or be made applicable to Mr. Longley, who has been sent out under a special Covenant, for a special purpose, and on a special salary, and does not belong to the Indian Navy. The Chief Engineer will report, therefore, whether Mr. Longley's salary, which appears to be 250 Rupees a month, is or is not a fair remuneration for the duties devolving on him in his present office. If it is not, it would be preferable to raise his pay than introduce the awkward precedent proposed. But the Government cannot see any reason for increasing Mr. Longley's wages, because he has engaged for the salary stipulated in the words of the Covenant, to "wholly employ himself "honestly, efficiently, and diligently, under the orders and instructions of the officer or officers "under whom he shall from time to time be placed. And also shall and will, in addition to the "discharge of the particular duty hereinbefore mentioned, make himself in other respects "generally useful, and do the best to instruct the workmen and others who may be placed under "him."

2. The Chief Engineer will explain why the Artificers are at work for such an unusually long period as ten hours daily.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 140. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th October 1861, No. 6,491:—

SIR,

With reference to the Proceedings of Government, dated 10th May 1861, No. 918, I have the honor to request that I may be informed, whether it has yet been decided that the Govern-

ment House at Madras shall be converted into Public Offices, and if so, whether the District Engineer Presidency may proceed with the erection of the iron railing and gates to the compound after the manner proposed in paragraph 2 of my letter of the 22nd April 1861, No. 12,294, embodied in the Proceedings above quoted.

No. 141. ORDER THEREON, 11th November 1861, No. 2,087.

The Chief Engineer will await further instructions and meanwhile arrange for the articles being properly taken care of.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 142. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 4th November 1861, No. 6,810 :—

SIR,

1. With reference to the Orders of Government, No. 1,971, dated 26th October 1861, I have the honor to state that no family payments appear from the Accounts Current of the District Engineers to have been made *in* the month of June 1861. The account submitted with my letter of the 6th September last, No. 4,677, shows that the allowances *for* April were disbursed *in May* and those *for* May *in July* 1861.

2. The payments *for* June were made *in the month of August* 1861, as reported in my letter of the 5th October last, No. 5,614.

Ordered that the following letter be despatched.

No. 143. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Public Works Department, dated 11th November 1861, No. 2,088 :—

SIR,

I am directed by His Excellency the Governor in Council to inform you with reference to your letter dated 4th October 1861, No. 3,559, that no payments were made *in* June last to the families of the Madras Stone Cutters employed at the Alguada Reef Light House.

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No. 144. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th October 1861, No. 6,512 :—

SIR,

With reference to the Proceedings of Government, dated 21st October 1861, No. 1,931 approving of the repair and improvement of certain portions of the road leading from Pálghát to Madura at a cost of Rupees 10,250, I have the honor to request that the Civil Paymaster may be authorized to transfer the above amount to the District Engineer of Madura, out of the funds placed at the disposal of the District Engineer Presidency, as the total amount allotted to his District is not likely to be expended during the current official year.

No. 145. ORDER THEREON, 11th November 1861, No. 2,089.

Agreeably to the Chief Engineer's recommendation, the Government authorize the transfer of (10,250) ten thousand two hundred and fifty Rupees, out of the funds at the disposal of the District Engineer Presidency, to the District Engineer of Madura, for the purpose of applying the same to the repair and improvement of certain portions of the road from Pálghát to Madura, sanctioned in Proceedings dated 21st October 1861, No. 1,931.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 146. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 1st November 1861, No. 6,709:—

SIR,

1. In the accompanying letter* the Collector of Coimbatore calls the attention of the District Engineer to the necessity of the repairs to the small Travellers' Bungalow at Mettapolliem, but as the estimate, Rupees 240, amounted to more than one fourth of the value of the building, the District Engineer was precluded by paragraph 1, Section III, Chapter XXIV, of the Public Works Code, from carrying them out. Considerable delay has already taken place in obtaining from the District Engineer a valuation statement, and as the work is of an emergent nature and the accommodation urgently called for, I have directed the District Engineer to execute the repairs without further loss of time, and trust the Government will approve of my having done so.

* No. 281, dated 8th October 1861.
2 Letters from the District Engineer, Nos. 157 and 294, dated 6th July and 3rd October 1861.
1 Valuation estimate prepared in this Office.
1 Abstract estimate, do. do.
1 Plan.

2. The repairs consist of putting on an entirely new roof and raising the walls two feet with brick in chunam.

3. The cost will be defrayed from the general funds of the District.

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No. 147. ORDER THEREON, 11th November 1861, No. 2,090.

Approved.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 148. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 22nd October 1861, No. 6,231:—

SIR,

1. In forwarding herewith explanatory remarks, a list of bills of the Acting District Engineer Godavery for works executed on emergency, submitted for the sanction of Government, together with letters from that Officer in connection therewith, I have the honor to observe that though the works referred to therein were individually necessary and of small amount, yet that they have been executed by Mr. Hawkins in an irregular manner, inasmuch as the estimates were not submitted until after the works had been finished when they were of course of no use.

1 List of bills.
4 Bills.
1 Audit of bills for 1860-61, with one enclosure.
2 Letters, 15th July and 12th August 1861, with four enclosures.

2. With regard to the expenditure on the Ferry boats, the Order* of Government quoted by the Acting District Engineer, does not, in my opinion, apply to boats already built; but enjoins only that the future provision of a means of transit across the canals be left to the people themselves.

* 20th October 1858, No. 2,202.

3. In the case of the avenue trees the expenditure appears to have been incurred by Mr. Hawkins under a misapprehension of the orders of Government on that subject. He has, however, been long enough in the Department to know that he has no authority to expend money on any work, however useful, that has not been sanctioned.

4. As the repair of the two tanks, which form the two last items in the list now sent, appears to have been absolutely necessary (though this is no excuse for Mr. Hawkins' breach of rules) I beg that the bills for them, as also those for the two other works noticed above may be sanctioned.

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No. 149. ORDER THEREON, 11th November 1861, No. 2,091.

The irregularity of Mr. Hawkins' proceedings as now brought to notice is highly reprehensible; but as the necessity of the works is affirmed by the Chief Engineer, the Government sanction the bills. They await the report respecting Mr. Hawkins, called for in the Order of 9th October 1861, No. 1,873.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 150. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 24th October 1861, No. 50:—

SIR,

1. With the accompanying letter* the Agent submits an application for Rupees 50,000 for the purpose of laying in a store of 25,000 cubic feet of Teak timber indented for by the Chief Engineer for Lock gates, Sluice shutters and other important parts of the works.

* No. 462 of 22nd October 1861.

2. The Chief Engineer explains that from the enquiries he has made he sees no way of procuring the timber except from Moulmein, whence it can be obtained ready felled of suitable dimensions and moderate cost.

3. The Quoin and Mitre posts of the Lock gates will be of larger dimensions than the Teak procurable near the line of the Company's works affords, and it will probably be the cheapest way to procure it as proposed from Moulmein, but from whereever it may have to be obtained, it is necessary that an advance should be made for the purpose, and I beg therefore that the Agent's request for Rupees 50,000 may be complied with.

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No. 151. ORDER THEREON, 11th November 1861, No. 2,092.

The Government agree as to the advisability of a moderate stock of timber for the Irrigation Company's works being laid in, but it should be obtained by open contracts. The Consulting Engineer will therefore instruct the Agent to invite tenders for the purpose by publishing advertisements both here and at Moulmein.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 152. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 5th November 1861, No. 57:—

SIR,

I have the honor to request that the necessary instructions may be issued to the Accountant General to disburse the amount of the Agent's Drafts during my temporary absence from the

Presidency. On a previous occasion his Draft was paid by the Sub-Treasurer who sent them for my countersignature after my return.

No. 153. ORDER THEREON, 11th November 1861, No. 2,093.

Ordered accordingly.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 154. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 5th November 1861, No. 58 :—

SIR,

1. In consequence of the boundary of the Territory of His Highness the Nizam not having been correctly marked out when the Chief Engineer's survey of the line of the Canal was made, a correction in the calculation of the area became necessary, and the Chief Engineer has forwarded the accompanying tracing showing the requisite alteration.

2. The areas of land included in the Nizam's Territory are therefore not 100·54 (A) 68·8 (B) as shown in Schedule No. 26, but 94·74 (A) 64·2 (B), the difference 5·8 and 4·6 being comprised within the limits of the village of Alloor in the Kurnool District.

3. If the land plans forwarded with my letter No. 23, of the 2nd September 1861, were transmitted to the Resident it will be necessary that the corrected tracing and Schedule should likewise be sent.

MADRAS IRRIGATION AND CANAL COMPANY'S LAND PLAN, No. 26.

*Schedule of land required in Village of Sultanpúr, Nizam's Territories.*

| Reference on plan. | Purpose for which required. | Class A. Colored pink. | Class B. Colored yellow. | Class C. Colored purple. | Class D. Colored green. |
|---|---|---|---|---|---|
| | Canal............ ...... | 94·74 | | | |
| | Extra excavation...... | ...... | 64·2 | | |
| | Total...... | 94·74 | 64·2 | | |

(Signed) H. C. COTTON,
*Chief Engineer.*

Central Office,
Kurnool, 21st October 1861.

(Signed) F. H. RUNDALL, Lieut.-Colonel.
*Consulting Engineer for I. & C. Co.*

No. 155. ORDER THEREON, 11th November 1861, No. 2,094.

The orders of the Nizam to his Officers for the transfer of land required for the Irrigation Company's works have been transmitted to the Collector of Kurnool with the Proceedings of Government, dated 7th November 1861, No. 2,058. The Consulting Engineer in his letter above recorded reports that the extent of land required in the Village of Sultanpúr is acres 158·76 and not acres 168·62 as already intimated to the Resident at Hyderabad and specified in the Orders alluded to. The extent to be actually transferred is, however, less than that

specified in the Nizam's orders, and the Government conclude that the Officers of the Nizam will raise no objections for the transfer. These papers will, in the meanwhile, be sent to the Resident for his information.

(Signed) J. D. SIM,
*Secretary to Government.*

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Ordered that the following letter be despatched.

No. 156. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Resident at Hyderabad, dated 11th November 1861, No. 2,095

SIR,

1. I have the honor, under the orders of His Excellency the Governor in Council, to forward to you copies of the papers noted in the margin together with a revised schedule and tracing to be substituted for the similar papers which accompanied my letter, dated 18th September 1861, No. 1,745, in regard to the lands required for the Irrigation and Canal Company's works in the village of Sultanpûr in the Nizam's Territories.

Letter from Consulting Engineer Irrigation and Canal Company, dated 5th November 1861, No. 58.
Order thereon dated 11th November 1861, No. 2,094.

2. You will observe that the extent of land actually required in the village in question is less than that already applied for, and the Government conclude that the Nizam's Officers will raise no objections to the transfer of it, agreeably to the orders which accompanied your letter, dated 2nd November 1861, No. 1,703.

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No. 157 Read the following letter from J. W. B. DYKES, Esq., Collector of Nellore, to J. D. SIM, Esq., Secretary to Government, dated Nellore, 8th November 1861, No. 44:—

SIR,

1. Mr. Sage, the Executive Engineer in charge of the Anicut, having received orders from the Central Office of the Department of Public Works to proceed forthwith to the Godavery, I have the honor to request you will be good enough to submit for the consideration of Government my respectful protest against the removal of Mr. Sage from this District at the present time.

2. As the Government are aware, we have already lost one Anicut on which Rupees 1,83,281 or thereabouts had been expended. We have now sunk Rupees 90,148* more in the construction of a second Anicut. And were this second Anicut completed and the District well provided with experienced Officers, it would still be a doubtful policy to remove the Officer who had built it, before its strength had been tried by a single monsoon.

* Up to 30th April 1861.

3. But, as the case really stands, this second Anicut has not been completed. It still requires to be raised some two feet to give its full height on the body of the work.† It still requires another set of under-sluices to be built. And not only are there these cogent reasons for retaining Mr. Sage in his present duties, but the District is now short of Officers. And Mr. Sage is the only Officer in the District, who has had it in his power to study the working of Anicuts elsewhere. He has the experience requisite to meet the difficulties, which beset the first few years of a completed Anicut. When an Anicut has been built, it is by no means finished as we have already learnt in this District to the heavy cost of Government. It requires constant watching. There is a set of the current here, and a set there, all of which must be stopped in time and by judicious expedients, or the Anicut goes to a certainty. And therefore, whether as regards the Anicut

† The front wall has been built to full height.

when completed, or in its present unfinished state, I cannot but regard the removal of Mr. Sage as directly opposed to the interests of Government and of the District in my charge, and believe it to be my duty to submit this protest against such removal, and respectfully request that the Government will be pleased to take the arrangements into consideration and issue such orders as shall secure Mr. Sage's remaining in charge of the Pennár Anicut, till the work has been completed, thoroughly tested, and I trust, thoroughly protected.

4. Mr. Sage's removal is, I believe, accompanied by Mr. Sage's promotion. Looking on the District as much indebted to Mr. Sage for the important part he has taken in the construction of the Anicut, so far as completed, I beg respectfully to express my hope, that if the public service be considered to require his remaining in the District, considerations of a public nature shall not be permitted to interfere with his advancement in the Department to which be belongs.

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No. 158. ORDER THEREON, 11th November 1861, No. 2,096.

Forwarded to the Chief Engineer for due consideration.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 159. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 26th October 1861, No. 6,461 :—

SIR,

21 Letters from District Engineers (detailed below) with encl sures.
1 List from Civil Auditor, dated 27th April 1861.
1 Statement A.
1 Do. B.

1. In their Order No. 734, dated 20th April 1858, the Government were pleased to authorize the Chief Engineer to sanction estimates for office furniture required for the use of the various District Engineers, when the cost in each case was below Rupees 100 and to submit for their sanction all estimates in excess of that amount.

2. In their subsequent Proceedings, No. 1,832, dated 30th July 1859, this order was authorized to be extended so as to include Executive and Assistant Engineers, to whom also Government were of opinion that office furniture within the limit mentioned above should be supplied, either on estimates passed by this Office or sanctioned by them.

| | RS. | A. | P. |
|---|---|---|---|
| South Arcot | 175 | 13 | 8 |
| North Arcot | 99 | 12 | 9 |
| Bellary | 398 | 8 | 0 |
| Madras | 230 | 0 | 0 |
| Malabar | 174 | 12 | 0 |
| Cuddapah | 137 | 0 | 0 |
| North Canara | 95 | 0 | 0 |
| Godavery | 63 | 0 | 0 |
| Kurnool | 32 | 14 | 0 |
| Madura | 71 | 4 | 0 |
| Nellore | 42 | 12 | 0 |
| Tinnevelly | 27 | 3 | 0 |
| Vizagapatam | 76 | 8 | 0 |
| Salem | 315 | 4 | 0 |
| Tanjore | 99 | 9 | 9 |
| Total.. | 2,039 | 5 | 2 |

3. The total sum passed by the Civil Auditor up to 30th April last on bills submitted by the various Officers for furniture obtained in pursuance of the foregoing orders of Government will be seen from the accompanying Statement, to amount to Rupees 2,039-5-2, as shown in the margin.

4. The late Chief Engineer Colonel Bell, observing that estimates in excess of the limit fixed by Government had been submitted by several of the local Officers, considered it advisable to ascertain the allotment of furniture proposed for each District and Range Office, the quantity available and that required to make up the complement. With this object in view therefore, all District Engineers were requested in Circular No. 162, dated 24th November 1859, to forward, in the forms furnished to them, complete information on the foregoing points, and it was intended as soon as the whole of the replies had been received to submit the matter for the orders of Government.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| From | District | Engineer | Ganjam, | No. | 371, | dated | 4th January 1860. |
| Do. | do. | do. | Vizagapatam, | ,, | 883, | ,, | 7th ,, ,, |
| Do. | do. | do. | Godavery, | ,, | 173, | ,, | 2nd February ,, |
| Do. | do. | do. | Kistna, | ,, | — | ,, | 24th January ,, |
| Do. | do. | do. | Nellore, | ,, | 7, | ,, | 24th ,, ,, |
| Do. | do. | do. | Cuddapah, | ,, | 972, | ,, | 24th December 1859. |
| Do. | do. | do. | Bellary, | ,, | 452, | ,, | 26th January 1860. |
| Do. | do. | do. | Kurnool, | ,, | — | ,, | 27th ,, ,, |
| Do. | do. | do. | Madras, | ,, | 1,735, | ,, | 14th February ,, |
| Do. | do. | do. | North Arcot, | ,, | 1,480, | ,, | 4th ,, ,, |
| Do. | do. | do. | South Arcot, | ,, | 220, | ,, | 19th January ,, |
| Do. | do | do. | Tanjore, | ,, | 354, | ,, | 15th March ,, |
| Do. | do. | do. | Trichinopoly, | ,, | 1,123, | ,, | 18th January ,, |
| Do. | do. | do. | Madura, | ,, | 1,158, | ,, | 27th ,, ,, |
| Do. | do. | do. | Tinnevelly, | ,, | 136, | ,, | 26th December 1859. |
| Do. | do. | do. | Coimbatore, | ,, | 306, | ,, | 2nd March 1860. |
| Do. | do. | do. | Salem, | ,, | 893, | ,, | 7th January ,, |
| Do. | do. | do. | North Canara | ,, | 155, | ,, | 13th December ,, |
| Do. | do. | do. | South Canara, | ,, | — | ,, | 31st ,, 1859. |
| Do. | do. | do. | Malabar, | ,, | 7, | ,, | 7th January 1860. |
| Do. | Executive | Engineer | Bangalore, | ,, | 378, | ,, | 14th December 1859. |

5. In pursuance of this Circular, the several District Engineers have forwarded, with the letters marginally noted, Returns supplying the information called for; and in order to place the same before Government in one view, I have thought it advisable to embody in the Statement marked A (prepared in the Central Office) herein enclosed the allotment of furniture proposed by each Officer for his District, the quantity in use; that required to complete the allotment, and the cost of the same as estimated by the local Officers. From this Statement, it will be observed that the total number and cost of each description of furniture stated to be required in the whole of the Public Works Offices in the Mufassal are as follows, and that the sums required to enable the local Officers to supply themselves with the articles amount in the aggregate to Rupees 16,126-7-0, distributed amongst the various Districts as shown in the margin :—

| | Rs. | A. | P. |
|---|---|---|---|
| Ganjam | 379 | 0 | 0 |
| Vizagapatam | 482 | 11 | 0 |
| Godavery | 1,026 | 0 | 0 |
| Kistna | 1,065 | 8 | 0 |
| Nellore | 832 | 0 | 0 |
| Cuddapah | 645 | 0 | 0 |
| Bellary | 1,371 | 8 | 0 |
| Kurnool | 624 | 0 | 0 |
| Madras | 1,612 | 0 | 0 |
| North Arcot | 1,054 | 0 | 0 |
| South Arcot | 382 | 4 | 0 |
| Tanjore | 1,334 | 8 | 0 |
| Trichinopoly | 1,017 | 0 | 0 |
| Madura | 372 | 0 | 0 |
| Tinnevelly | 676 | 0 | 0 |
| Coimbatore | 911 | 0 | 0 |
| Salem | 471 | 8 | 0 |
| North Canara | 651 | 8 | 0 |
| South Canara | 588 | 0 | 0 |
| Malabar | 567 | 8 | 0 |
| Bangalore | 63 | 8 | 0 |
| Total.. | 16,126 | 7 | 0 |

| | No. | | Cost. | | |
|---|---|---|---|---|---|
| Large Almirahs ... ... ... ... | 28 | ... Rupees. | 1,407 | 0 | 0 |
| Small do. ... ... ... ... | 87 | ... ,, | 2,621 | 1 | 0 |
| Office Tables... ... ... ... ... | 86 | ... ,, | 1,894 | 0 | 0 |
| Do. Desks ... ... ... ... | 223 | ... ,, | 3,777 | 0 | 0 |
| Gumáshtas' Desks... ... ... ... | 79 | ... ,, | 669 | 0 | 0 |
| Chairs.... ... ... ... ... | 530 | ... ,, | 2,367 | 8 | 0 |
| Record Boxes. ... ... ... ... | 74 | ... ,, | 940 | 4 | 0 |
| Camp Tables ... ... ... ... | 124½ | ... ,, | 1,292 | 8 | 0 |
| Do. Chairs ... ... ... ... | 248 | ... ,, | 1,066 | 12 | 0 |
| Stands with pigeon-holes ... ... | 1 | ... ,, | 10 | 6 | 0 |
| Sets of Shelves ... ... ... ... | 1 | ... ,, | 3 | 0 | 0 |
| Office Pigeon-holes. ... ... ... | 11 | ... ,, | 66 | 0 | 0 |
| Camp Stools ... ... ... ... | 8 | ... ,, | 12 | 0 | 0 |
| | Total... | ,, | 16,126 | 7 | 0 |

| | | |
|---|---|---|
| District | Engineer | Nellore. |
| Do. | do. | Bellary. |
| Do. | do. | Madras. |
| Do. | do. | South Arcot. |
| Do. | do. | Tanjore. |
| Do. | do. | Salem. |

6. It will be observed from the estimates and returns submitted by the Officers noted in the margin, that cash chests have been indented for; but as this subject has been always kept distinct, I have omitted them from the Statement A prepared in this Office. The District Engineer Nellore, has indented for table covers and carpets, but as no provision for such articles has been made by any of the other local Officers, they also have been omitted from the return just mentioned.

7. On an examination of the estimates submitted by the various District Engineers, great disparity has been found to exist in the rates charged for each kind of furniture, as well as in the allotment fixed by them for their respective Districts. I have therefore considered it necessary to revise the allotment in this Office, taking the Districts as classed in page 480* of the Circular Order Book and to estimate the cost of the furniture required in accordance with data supplied by the Barrack Master at the Presidency, which I am of opinion affords a sufficiently correct, general average.

* 1st Class Districts.
Godavery, Kistna, Tanjore, Bellary, Cuddapah.
2nd Class Districts.
Nellore, North Arcot, South Arcot Coimbatore, Tinnevelly, Madura.
3rd Class Districts.
Ganjam, Vizagapatam, Kurnool, North Canara, South Canara, Malabar, Madras, Trichinopoly, Salem.

8. The number and classes of Ranges in the various Districts are shown below:—

| | 1st and 2nd Class Ranges. | 3rd and 4th Class Ranges. | Total. |
|---|---|---|---|
| Ganjam | 2 | 1 | 3 |
| Vizagapatam | 1 | 2 | 3 |
| Godavery | 4 | 3 | 7 |
| Kistna | 5 | 2 | 7 |
| Nellore | 4 | 0 | 4 |
| Cuddapah | 3 | 1 | 4 |
| Bellary | 5 | 1 | 6 |
| Kurnool | 1 | 3 | 4 |
| Madras | 3 | 0 | 3 |
| North Arcot | 2 | 3 | 5 |
| South Arcot | 2 | 2 | 4 |
| Tanjore | 6 | 0 | 6 |
| Trichinopoly | 3 | 1 | 4 |
| Madura | 3 | 0 | 3 |
| Tinnevelly | 3 | 2 | 5 |
| Coimbatore | 2 | 4 | 6 |
| Salem | 1 | 2 | 3 |
| North Canara | 2 | 3 | 5 |
| South Canara | 1 | 1 | 2 |
| Malabar | 3 | 1 | 4 |

9. The Establishment sanctioned for the various classes of Districts and Ranges is as follows:—

| For 1st Class Districts. | For 2nd Class Districts. | For 3rd Class Districts. | For 1st and 2nd Class Ranges. | For 3rd and 4th Class Ranges. |
|---|---|---|---|---|
| 1 Draftsman. | 1 Draftsman. | 1 Draftsman. | ........... | ........... |
| 3 Accountants. | 3 Accountants. | 2 Accountants. | 2 Writers. | 1 Writer. |
| 2 Writers. | 2 Writers. | 2 Writers. | 1 Gumáshta. | 1 Gumáshta. |
| 3 Gumáshtas. | 2 Gumáshtas. | 2 Gumáshtas. | ........... | ........... |

10. The allotment for the three Classes of Districts, and for the four Classes of Ranges, as fixed in the Central Office, is shown in the following statement:—

| | For 1st Class Districts. | For 2nd Class Districts. | For 3rd Class Districts. | For 1st and 2nd Class Ranges. | For 3rd and 4th Class Ranges. |
|---|---|---|---|---|---|
| Large Almirahs | 2 | 1 | 1 | 0 | 0 |
| Small do. | 3 | 2 | 2 | 1 | 1 |
| Office Tables | 1 | 1 | 1 | 1 | 1 |
| Do. Desks | 5 | 5 | 4 | 2 | 1 |
| Drawing Tables | 1 | 1 | 1 | 0 | 0 |
| Gumáshtas' Desks. | 3 | 2 | 2 | 1 | 1 |
| Camp Chairs | 3 | 3 | 3 | 2 | 2 |
| Armless do. | 6 | 6 | 5 | 2 | 1 |
| Camp Tables. | 2 | 2 | 2 | 1 | 1 |
| Camp Stools | 7 | 7 | 6 | 3 | 2 |
| Bullock Trunks for Records. | 4 | 4 | 4 | 2 | 2 |

11. In addition to the above, provision has been made in Statement B for the supplying of a Desk to each of the Gumáshtas (86 in number) attached to the District minor establishments, sanctioned by Government in their Proceedings, No. 594, dated 25th March 1861.

12. The 1st and 2nd and the 3rd and 4th classes of Ranges have been allowed the same quantity of furniture, as the number of Clerks employed in the Offices of the 1st and 3rd is exactly the same as those in the 2nd and 4th respectively, although their salaries differ to some extent.

| | RS. | A. | P. |
|---|---|---|---|
| Ganjam | 526 | 15 | 9 |
| Vizagapatam | 452 | 12 | 0 |
| Godavery | 1,035 | 2 | 4 |
| Kistna | 1,157 | 2 | 9 |
| Nellore | 726 | 4 | 3 |
| Cuddapah | 658 | 7 | 8 |
| Bellary | 861 | 2 | 6 |
| Kurnool | 738 | 12 | 5 |
| Madras | 385 | 6 | 6 |
| North Arcot | 725 | 9 | 4 |
| South Arcot | 610 | 9 | 0 |
| Tanjore | 947 | 7 | 9 |
| Trichinopoly | 747 | 4 | 3 |
| Madura | 533 | 4 | 1 |
| Tinnevelly | 833 | 7 | 1 |
| Coimbatore | 652 | 0 | 1 |
| Salem | 406 | 4 | 6 |
| North Canara | 784 | 1 | 9 |
| South Canara | 504 | 10 | 4 |
| Malabar | 553 | 4 | 3 |
| Bangalore | 28 | 0 | 0 |
| Total | 13,868 | 0 | 7 |

13. The Executive Engineer Bangalore, has asked for two Office tables only, but as I consider that desks of the usual kind will be sufficient, I have made provision accordingly in Statement B.

14. Thetotal number and cost of each description of furniture provided for in Statement B are as follows, and the amount required in each District to make up the articles is shown in the margin :—

| Articles. | No. required. | Cost. RS. | A. | P. |
|---|---|---|---|---|
| Large Almirahs... | 8 | 496 | 0 | 0 |
| Small do. ... | 105 | 4,469 | 1 | 0 |
| Office Tables ... | 61 | 1,372 | 8 | 0 |
| Do. Desks ... | 202 | 2,828 | 0 | 0 |
| Drawing Tables | 20 | 492 | 13 | 0 |
| Armless Chairs... | 203 | 639 | 10 | 7 |
| Gumáshtas' Desks | 158 | 908 | 8 | 0 |
| Bullock Trunks | 114 | 1,140 | 0 | 0 |
| Camp Tables ... | 66 | 528 | 0 | 0 |
| Camp Chairs ... | 103 | 515 | 0 | 0 |
| Camp Stools ... | 319 | 478 | 8 | 0 |
| | Total...... | 13,868 | 0 | 7 |

15. I would here remark that the allotment prepared in the Central Office provides for the supply of the quantity actually required of the articles noted in the margin, for the use of the Officers and their Establishments as they now stand, except that two extra camp chairs have been allowed for each District Engineer and one for each Range Officer. As regards the other articles, the allotment has been prepared with reference to present wants, and I am of opinion that the quantities of all descriptions of furniture provided for in that allotment have been fixed in the lowest possible scale.

Office Tables.
Do. Desks.
Drawing Tables.
Armless Chairs.
Camp Chairs.
Gumáshtas' Desks.
Camp Stools.

16. In conclusion, I would beg to observe that several representations having been made by District Engineers relative to the very great inconvenience to which they, as well as the Range Officers, are put in the absence of a proper allotment of Office furniture, I have considered it unadvisable to withhold any longer from Government the papers referred to above, and in submitting them, I beg strongly to recommend, with a view to the preservation of the Records which have necessarily accumulated since the re-organization of the Department, and in order to afford the District Engineers and Range Officers, as well as their Office Establishments every facility for conducting their duties, that early sanction may be accorded to the sum of Rupees 13,868-0-7 mentioned in paragraph 14; Rupees 10,000 of that sum being defrayed from the amount provided for Office furniture in the Supplemental Budget submitted by this Office to the Accountant General, and the balance being met from the next year's Budget, in which the necessary provision will be made under the authority of Government.

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No. 160. ORDER THEREON, 12th November 1861, No. 2,097.

Sanctioned as proposed.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 161. Read the following letter from Lieutenant-Colonel A. J. M. BOILEAU, Government Superintendent and Controller, Pier Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 19th September 1861 :—

SIR,

1. I have the honor to forward for the information of Government a true copy of a Certificate, which I have given to the Contractor of the Madras Pier, of the completion of the 4th Section of 200 feet.

2. The length of the Pier (including the Inshore extension) is now 892 feet (2 of which will eventually rest on the abutment), and the length, inclusive of the T head remaining to be constructed, is 200 feet.

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*Certificate of the* 4*th* (200 *feet*) *Section of the Madras Pier.*

1. I hereby certify that with the exceptions to be hereafter noted, the 4th section of 200 feet in length of the Pier has been completed to my satisfaction, the work of the same having been executed in a substantial, sound, and work-man-like manner.

2. From measurements frequently made while this section was in progress the Piles therein, *i. e.*, from the 61st to the 81st row (the last inclusive), were found to be embeded in the ground depths varying from 13′-2″ to 14′-6″, and averaging on *all* the piles 13′-10″, while their present hold is even less than this, but they are passed under the authority of Government contained in their Order No. 1,021, dated 31st May 1861.

3. The planking is cut and arranged in precisely the same manner in this as in the last section, for which a Certificate was given, but in many places it does not sufficiently overlap the beams, so that it will be necessary to add underneath half balks, or thick planks for their support.

4. Three lines of rails should have been laid down, but owing to some rails being used by the Contractor for temporary purposes, the third line is not complete ; but the whole of the rails in this section already laid down, will require to be straightened, which the Contractor engages to do when the Pier shall have been erected in its full length.

5. The wrought-iron Tension rods which connect the alternate outer piles are not secured to the intermediate pile as they ought to be, in conformity with the copy of the drawing of 1856, in the Contractor's possession.

6. No diagonal stiffening pieces, as provided for in Clause 3, heading Timber Work in the specification, have been inserted with a view to the further strengthening of the frame work of timber.

7. The fender piles and waling pieces, which ought to enter into the construction of the Pier at the 77th row, and be continued uniformly throughout the rest of the work are none of them as yet fixed in position, which is owing chiefly to the greater part of the timber required for this purpose not having arrived from England, as it does not appear to have been contemplated to finish this portion of the work simultaneously with the rest of the pier.

(Signed) A. J. M. BOILEAU, Lieut.-Colonel,
*Government Superintendent and Controller, Pier Works.*

(True Copy.)

(Signed) A. J. M. BOILEAU, Lieut.-Colonel,
*Government Superintendent and Controller, Pier Works.*

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No. 162. ORDER THEREON, 12th November 1861, No. 2,098.

Ordered to be recorded.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 163. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 9th October 1861, No. 5,750:—

Proceedings of Government, No. 2,414, 22nd November 1860.
Do. No. 1,702, 12th September 1861.
1 Report of Mr. Kennedy, dated 15th January 1861, No 230.

SIR,

1. Referring to the orders noted in the margin, I have the honor to state that immediately on the receipt of instructions from Government, I directed Mr. Kennedy, 1st Assistant District Engineer Madras, to survey the boiler of the steamer "Progress," and also to carefully inspect *all* the steam engines and boilers in use by the Department at the Presidency. Mr. Kennedy performed this duty in a satisfactory and business-like manner, and I beg herewith to forward his report. You will perceive that he is of opinion that although the lower gauge cock on the boiler of the steamer "Progress," was undoubtedly too low by 3 inches, yet that the accident to its boiler would never have occurred if the water had not been allowed to get a great deal lower than the gauge. Again he states, "that there can be little doubt as to the cause of the error in the placing of "the gauge cocks—the top of the tubes has evidently been taken as the highest unprotected "line, instead of the top of the plate of the smoke box.

2. Mr. Kennedy is a Civil Engineer of considerable experience in the working of steam engines, and his opinion is entitled to every consideration, emanating as it does from an impartial person, who has had the advantage of hearing both sides of the question, and has personally made a thorough examination of the boiler of the "Progress" the sister vessel to the "Little Nell," referred to in my letter No. 6,162, dated 24th October 1860.

Paragraph 2.

3. The view taken by Mr. Kennedy of the faulty position of the gauge cock of the "Progress" boiler is entirely confirmatory of the opinions previously expressed by Messrs. Moncrieff and Merrall, regarding the "Little Nell."

4. Mr. Kennedy, it will be observed, minutely examined all the other engines in use or in store at the Presidency belonging to this Department, and reported on each separately.

5. The Pile driving machines, both that in use on the beach and that in store in the Fort were ordered to be cleaned and the timber framing renewed on estimates submitted by the District Engineer Presidency.

Paragraph 14.

6. With regard to the copper tubes recommended by Mr. Kennedy in substitution of the present iron ones in the steam pump boilers, I may observe that we have since received a quantity of copper tubes from the Home Government, which will be fitted into the boilers as the iron ones become worn out.

* No. 1,702, 12th September 1861.

7. In conclusion, I beg to explain with reference to paragraphs 2 and 7 of the Government Order* regarding the boiler of the "Progress," that this report would have been submitted at a much earlier date but for the omission, inadvertently, of the above Order of Government in the Unanswered Reference List.

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No. 164. ORDER THEREON, 12th November 1861, No. 2,099.

1. Ordered to be communicated to the Home Government, with reference to paragraph 2 of the Despatch to the Secretary of State, dated 24th November 1860, No. 75.

2. The Government presume that the Chief Engineer has properly noticed the little care taken of the Pile Engine mentioned in paragraph 10 of Mr. Kennedy's report.

3. The reason assigned by the Chief Engineer for the great delay in the transmission of Mr. Kennedy's report is unsatisfactory.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 165. Read the following Proceedings of the Madras Government in the Military Department, dated 8th November 1861, No. 4,022 :—

Approving the estimate for making and fixing Teakwood Railings with Iron Cheveux de Frise on the wall that surrounds the European Regimental Privies situated on the berm outside the Fort. } (Vide Military Proceedings, 8th November 1861, Nos. 181-182.)

No. 166. ORDER THEREON, 12th November 1861, No. 2,100.

Communicated to the Chief Engineer, with reference to his letter dated 28th October 1861, No. 6,493.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 167. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 22nd October 1861, No. 6,229 :—

SIR,

* Nos. 48, 169, 185 and 303, dated 23rd June, 14th and 24th November 1860, and 29th April 1861, From District Engineer.

1. I have the honor to forward the accompanying correspondence as per margin, with the District Engineer of Salem, relating to the excess of expenditure in the construction of the District Engineer's Office and Workshop at that station.

Extract Minutes of Consultation, No. 1,622, 10th September 1856.

2. The original estimate for this work, amounting to Rupees 3,640, was sanctioned by Government as marginally noted, the work was commenced in May 1857 and stopped in the following July, in consequence of the restrictive orders on expenditure; it was re-commenced in February 1859, and again stopped in September of the same year.

3. The amount actually expended on the building to end of April 1861 is Rupees 3,583-0-10, and that required to complete it is Rupees 1,363-8-6, exclusive of materials in hand to the value of Rupees 836-6-8, making a total of Rupees 5,783, or Rupees 2,143 in excess of the original estimate.

4. The chief causes of this excess, are 1st, the increase in the price of materials and labor since 1856, when the original estimate was framed; and 2nd, deviations from the sanctioned design as shown in the accompanying plan.

5. As regards the deviations and the authority under which they were made Captain Gahagan offers the following explanation, which I must say I consider very unsatisfactory :—

" I find indeed considerable difficulty in recalling to mind the history of a work which was " commenced four years ago when the Department Public Works in its present form had only been " in existence for a few months, and when, owing to my being the only Executive Officer in " the District with the entire executive responsibility of two Ranges on my hands, in addition " to the duties of District Engineer, irregularities were rife."

6. He adds also that the deviations in question appeared to him necessary or advisable at the time, but he neglected to report them. The following are some of the alterations carried out.

7. The District Engineer's Office room was turned half round, and this change was introduced to simplify and lessen the cost of the roofing without altering the size of the rooms.

8. The original estimate provided for two Workshops, the aggregate length of which was to be 56 by 16, instead of which one Workshop 72½ by 24½ was built, and Captain Gahagan remarks that he does "not recollect ever having taken into account the question of their relative areas."

The two Workshops should have cost Rupees 600, the actual cost of the one now constructed is Rupees 900. As 40 Prisoners had to be temporarily accommodated while employed at the new Jail, they were housed in the Workshop, and the Inspector General of Jails expressed his willingness to give as much as Rupees 500 for their accommodation; but by an error in computing the actual cost of the Workshop, the District Engineer states that the Inspector General of Jails was charged only Rupees 203, or about ⅓rd of the *estimated* cost.

9. Brick and stone in mud instead of chunam have been used in certain parts of the building to diminish the cost as much as possible, without materially injuring its durability.

10. The site for the Office not having been selected when the original estimate was prepared, an increased expenditure has been entailed by the increased length of the compound wall and to prevent further excess, it is proposed to dispense with the Peons' sheds, which are not now necessary, and to construct the compound wall with mud and a tiled coping, instead of with stone in chunam.

11. The work was superintended by Mr. McFarlane, who had charge of and mismanaged the erection of the Jail and Court House close by, and was paid Rupees 20 per mensem while the work was in progress.

Rupees 203.

*Vide* Memorandum from the Chief Engineer dated 31st October 1861.

12. The excess, as above shown, is Rupees 2,143, from which if the amount paid by the Inspector General of Jails be deducted, the balance Rupees 1,737 after corrections made in the Central Office, viz., venetian windows altered to rattan windows for store-room and two windows altered into doors, as per plan, requires the sanction of Government. I beg to solicit that the sum, Rupees 1,363-8-6 wanted to complete the work, may be placed at the District Engineer's disposal from the reserve fund for the current year, should it be found after the north-east monsoon that there are funds available, and if not, that it be entered in the Budget of 1862-63, as it is very desirable that the buildings should be completed without further delay.

13. The proceedings above detailed, I am sorry to say, reflect great discredit on the Department Public Works in the Salem District; alterations have been made without authority, money spent in excess of the estimate and not reported at the time, and oversights and omissions acknowledged by the District Engineer.

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No. 168. ORDER THEREON, 13th November 1861, No. 2,101.

1. Sanctioned Rupees (1,737) one thousand seven hundred and thirty-seven.

2. The Government concur in the Chief Engineer's censure, and desire that Captain Gahagan be finally warned that hereafter in any case of irregularity involving an increase of expenditure, he will be held personally responsible.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 169. Read the following Endorsement of the Chief Engineer, dated Chepauk, 26th October 1861, No. 6,471.

Read the following letter from Captain H. L. PRENDERGAST, District Engineer of North Arcot, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Arcot, 17th July 1861, No. 375:—

SIR,

1. With reference to your Orders No. 2,276 of the 3rd instant, I have the honor to report, that I expressed my views to the Collector, regarding the proposal* by Government to transfer the road from Palmanair to Venkatagirikótta, to the charge of local funds; and Mr. Robinson fully agrees with me, that this should be constructed as a Government road, as follows:—

* No. 1,194, of the 28th June 1861.

"I am opposed to the proposition of transferring the Palmanair and Venkatagiri-"kótta line to the local fund list, for the following reasons:—

(1.) "That it has always been regarded and very recently accepted, as a work that "should be completed, as it has been commenced, at the cost of Government."

(2.) "That it traverses so far as it has been partially worked out, a very poor Táluq, "which contributes but little to the local fund and that if extended as it eventually should be "to the railway station at Kuppum, it will be for nearly, one-half of its length, within a "Zemindári tract where no road cess at all is levied."

(3.) "That traversing nearly the whole length of the extreme western frontier of the "District, its local advantages though great, will be quite secondary to the immense benefits it "will confer on the trade from the Cotton-growing Districts of Bellary and Cuddapah, and the "whole of the Mysore plateau."

(4.) "That the public purse has already been greatly relieved by the transfer of "seven roads, until lately at its charges, to the local fund list."

(5.) "That owing to the failure of the rains last season, the revenue of the District "has fallen some 2 lacs, and that old accumulations having been nearly expended, the collec-"tions of road cess for the past Fasli, will not more than suffice for the maintenance of lines "transferred to, and already constructed out of the local fund, and for the prosecution of some "fresh projects, most material to the convenience and welfare of the District."

(6.) "And lastly, I object to the proposition on the general grounds taken by Govern-"ment, in their Order† of the 29th August 1860, No. 1,841, "where they remark that it is not to be laid down as a maxim that "in Districts having a road fund, District roads are to have no "public money expended on them. If this were so, a District with a road fund, would be in a "worse position, than one without such a fund."

† Concluding paragraph.

"For these reasons, I deprecate the proposition of finishing and extending this road, at "the cost of the District."

"Hereafter it may be a question, whether after the road has been fully completed, the "charges of its maintenance might not be met out of the local fund."

2. As there is no difference of opinion on the subject, and the Collector's views are strongly expressed, I have not deemed it necessary to calculate what amount of money would be required to construct the line, as a District road; the funds requisite for this purpose might be obtained from the local cess, if Government refused to carry on the work; but of course in that event other operations of the local fund would have to be suspended; and probably a much longer time would elapse before the road could be considered complete.

From J. D. ROBINSON, Esq., Collector of North Arcot, to Captain H. L. PRENDERGAST, District Engineer of North Arcot, dated Palmanair, 13th July 1861.

SIR,

1. I have the honor in reply to your reference of the 9th instant, to state that I am opposed to the proposition of transferring the Palmanair and Venkatagirikótta line to the local fund list for the following reasons:—

(1.) That it has always been regarded, and very recently accepted as a work that should be completed, as it has been commenced, at the cost of Government.

(2.) That it traverses, so far as it has been partially worked out, a very poor Táluq which contributes but little to the local fund, and that if extended as it eventually should be to the railway station at Kuppum, it will be for nearly one-half of its length within a Zamindári tract where no road cess at all is levied.

(3.) That traversing nearly the whole length of the extreme western frontier of the District, its local advantages though great will be quite secondary to the immense benefits it will confer on the trade from the Cotton-growing Districts of Bellary and Cuddapah and the whole of the Mysore plateau.

(4.) That the public purse has already been greatly relieved by the transfer of seven roads, until lately at its charges, to the local fund list.

(5.) That owing to the failure of the rains last season, the revenue of the District has fallen some 2 lacs, and that old accumulations having been heavily expended the collections of road cess for the past Fasli will not more than suffice for the maintenance of lines transferred to, and already constructed out of the local fund, and for the prosecution of some fresh projects most material to the convenience and welfare of the District.

(6.) And lastly, I object to the proposition on the general grounds taken by Government in their Order* of the 29th August 1860, No. 1,841, where they remark " that it is not to be laid down as a maxim that in Districts " having a road fund " District roads" are to have no public " money expended on them. If this were so, a District with a road fund would be in a worse " position than one without such a fund." For these reasons I deprecate the proposition of finishing and extending this road at the cost of the District.

* Concluding paragraph.

2. Hereafter it may be a question whether, after the road has been fully completed, the charges of its maintenance might not be met out of the local fund.

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1. Submitted to Government with reference to their Proceedings, No. 1,194, dated 28th June 1861.

1 Original letter with one enclosure.

2. The letter from the Collector to this Office enclosing the second of the above letters is not forwarded as it refers to the Venkatagirikótta and Kongundi Kuppum, and it will be submitted as an enclosure in that project.

3. The Chief Engineer agrees in the reasons assigned by the Collector for not making the Venkatagirikótta and Palmanair road a District line and for not disbursing local funds upon it, at any rate until after its completion, and under this circumstance he has had no new estimate prepared to show the outlay required to make a District road of it.

4. Permission is now solicited for entering the sum Rupees 12,200 in the Budget of 1862-63.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 170. ORDER THEREON, 13th November 1861, No. 2,102.

1. Under the circumstances stated, the Government sanction the entry in the ensuing Budget of the sum of Rupees (12,200) twelve thousand two hundred, being the amount of the estimate for the completion of the road from Palmanair to Venkatagirikótta.

2. When the road is finished the propriety of maintaining it out of the local fund will be considered.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 171. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 28th October 1861, No. 6,492:—

SIR,

1 Letter dated 8th October 1861, No. 118.

1. I have the honor to submit for the favorable consideration of Government the accompanying letter from the District Engineer of Kistna requesting to be allowed an extended period for qualifying in the Vernacular of the District.

Dated 25th August 1859, No. 2,030.

2. Major Anderson assumed charge of the Kistna District on the 9th March 1861, and under Clause 2, paragraph 2 of the Proceedings of Government noted in the margin, he should be prepared to pass a colloquial examination in Telugu within 12 months from that date. He however, now requests that as the necessity of his acquiring a knowledge of the language was not pointed out to him when he joined the District, the period allowed under the orders above quoted may count from the date on which he received from this Office a letter calling his attention to the subject.

No. 5,511, dated 2nd October 1861.

3. Major Anderson also solicits that the prescribed period of 12 months may, in his case, be extended to 18 months, as he has been employed during nearly the whole period of his service in the Punjaub and Oude territories where he had no opportunity of learning the languages peculiar to this Presidency.

4. As the order of Government enjoining the necessity of all Officers passing in the language of the District to which they are appointed is contained in a Circular from this Office to all District Engineers and Officers of the Department it is not usual or necessary for the Chief Engineer to direct attention to it until the time for the examination approaches; but under all the above circumstances, I beg to recommend that Major Anderson's request be acceded to, and that the period be extended to October 1862, or 18 months from the date of his taking charge of the Kistna District, at the expiration of which period he will be required to pass a colloquial examination in Telugu.

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No. 172. ORDER THEREON, 13th November 1861, No. 2,103.

Under the circumstances stated and agreeably to the recommendation of the Chief Engineer, the Government permit Major Anderson's colloquial examination in Telugu to be deferred to October 1862.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 173 Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th October 1861, No. 6,544:—

SIR,

1 Letter from District Engineer Nellore, No. 1,750, dated 28th September 1861.
1 Estimate.

1. Agreeably to the Order conveyed in paragraph 3 of the Proceedings of Government of the 11th ultimo, No. 1,698, I have the honor to forward an estimate of Rupees 800 for gravelling the crown of the Nellore Anicut for the purpose of forming a road-way thereon.

2. This sum, the District Engineer states, will admit of a good road being annually maintained from 1st December to 1st May, and during the remainder of the year whenever the river does not overtop the Anicut, but between the 1st September and 1st December, all must depend on the nature of the season.

3. The District Engineer further remarks that to cover in the Anicut with a course of laterite 18 inches thick, and to lay a double line of trams in granite would cost Rupees 12,300, and would form a permanent roadway. Omitting the granite would reduce the cost to Rupees 5,600, but would render the road less durable. As the annual expense is expected to be defrayed by the receipts, I do not recommend the more expensive proposal at present, though it may hereafter be found desirable to carry it out.

4. The amount Rupees 800, required for the current year will be met from the general funds at the District Engineer's disposal, and I request authority for entering a similar sum in the Budget of 1862-63 and following years for a like purpose.

No. 174. ORDER THEREON, 13th November 1861, No. 2,104.

1. The Government sanction the estimate amounting to Rupees (800) eight hundred, for the formation of a roadway over the Anicut at Nellore.

2. A similar sum is sanctioned for entry in the ensuing Budget for a like purpose.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 175. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 6th November 1861, No. 6,898:—

SIR,

1 Letter from the District Engineer of Tinnevelly, No. 168, dated 23rd October 1861.
1 Sketch.
1 Abstract estimate, Rupees 1,620.

1. I have the honor to forward, for submission to Government, a sketch and estimate amounting to Rupees 1,620, for repairing a portion (4 miles and 81 yards in length) of road No. 10 within the limits of the Tenkási Táluq, in the District of Tinnevelly.

2. This portion of road passes through the villages of Mathalamparai, Kuthalaparai, and the town of Tenkási, and is the main outlet for the transport of merchandize to Travancore and the western Coast, viâ Shencotta and the Ariankoil Pass in the north, viâ Panagudi and the Arambuli Pass im the south.

3. This road was formerly made on estimate, but for want of maintenance allowance has fallen into disrepair.

4. Provision is made in the present estimate for putting on a coating of gravel 4 yards in width, and 3 inches in thickness, constructing two tunnels of one vent each, 4′ × 6′ and 3′ × 3′ respectively, and for a pavement of 20 yards in length.

5. The average number of Carts on this line is reported to be only 12 per diem at present, but it will no doubt increase when the road is improved.

6. The estimate, which has been examined and corrected in this Office, has been countersigned by the Collector in token of approval, and the rates given in it are not higher than are absolutely necessary to carry out the work. I request, therefore, you will be pleased to obtain the early sanction of Government to the amount, viz., Rupees 1,620, being defrayed from the general funds assigned to the District of Tinnevelly for expenditure during the current official year.

No. 176. ORDER THEREON, 13th November 1861, No. 2,105.

As the traffic on this road averages only 12 Carts daily, the Government cannot but think that the money sought would be better spent on some other line. If, however, the rest of the road is in fair order and this portion impedes traffic, the Chief Engineer can authorize its repair as proposed. The road would seem rather to be a Local than an Imperial line.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 177. Read the following Endorsement of the Chief Engineer, dated Chepauk, 24th October 1861, No. 6,333.

Read the following letter from Captain J. G. RYVES, District Engineer, to the Deputy Chief Engineer, Southern Circle, dated Goodaloor, 24th September 1861, No. 756 :—

SIR,

1. I have the honor to forward herewith a report of an accident which occurred at Paumben in the construction of the Travellers' Bungalow, by which the fore-arm of a Convict was broken, four other men being slightly hurt.

2. The report gives all necessary information except with regard to the cause of the accident, which I think can only be ascribed to the use of clay instead of chunam for the foundation and basements, and of slabs of sandstone instead of terrace bricks. Captain Brine authorized Captain Gib to build the foundation and basement with stone in white clay, but Lieutenant Hankin describes it as stone in mud, I have requested Lieutenant Hankin to give a more precise description of the quality of the stone work in foundation and basement, and to report on the whole work as it stands.

3. As regards the slabs of sandstone, I am not certain whether the Chief Engineer when issuing the Order, dated 23rd May 1860, No. 808, was aware that Captain Brine intended it to be understood that sandstone slabs were to be used for terracing. In the application and the answer the word *terrace* alone is used without specifying the material; but the same objections (bad quality and high price) which made it desirable not to use tiles would in the same place apply to terrace bricks; so that I have no doubt that Captain Brine intended to apply for authority for a terrace of sandstone slabs.

4. From the last paragraph of Lieutenant Hankin's letter you will perceive that the extra expense caused by this accident will be Rupees 62-7-0.

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1 Original letter.

1. Submitted for the information of Government, with reference to their Proceedings in the Revenue Department, No. 479, dated 28th March 1860.

2. It will be observed that by the accident now reported an extra expense of Rupees 62-7-0 will be caused.

3. It was not understood that sandstone slabs were to be used for terracing, as no mention was made of them in the application.

4. The use of clay instead of chunam in the foundations was an error on the part of the late Acting District Engineer, Captain Brine, and is no doubt the cause of the accident.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

No. 178. ORDER THEREON, 13th November 1861, No. 2,106.

The Chief Engineer will consider and decide whether Captain Brine (now in the Forest Department) should not be called upon to pay the extra cost of Rupees 62-7-0, which is shown to have been clearly caused by his having allowed clay to be used in the foundations instead of chunam for which the estimate provided.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 179. Read the following Proceedings of the Madras Government in the Military Department, dated 8th November 1861, No. 4,023 :—

Approving Chief Engineer's Proceedings, directing the District Engineer Bellary to proceed at once with the third range of the Barracks at Bellary. } (Vide Military Proceedings, 8th November 1861, Nos. 183-184.)

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No. 180. ORDER THEREON, 13th November 1861, No. 2,107.

Communicated to the Chief Engineer for his information and guidance, with reference to his letter dated 22nd October 1861, No. 6,272.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

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No. 181. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 5th November 1861, No. 6,845 :—

SIR,

1. With reference to the Proceedings of Government, No. 1,975, dated 26th October 1861, I have the honor to recommend that Lieutenant H. Smalley may be allowed to take up his own appointment as Second Assistant District Engineer South Canara, and that he be relieved in Wainád by Captain Syme, Second Assistant District Engineer Bellary, who has just returned from sick leave to Europe, and who will be glad to go to Wainád in preference to Bellary.

2. At present Lieutenant Prendergast of the Engineers is acting for Captain Syme in Bellary, and this arrangement I propose should continue, but as Lieutenant Prendergast is drawing the salary of Second Assistant in Bellary, it will be necessary that Captain Syme's salary and travelling allowance should be paid from the sum* allotted for the improvement of the communications in Wainád, the supervision of which will form his principal duty.

* Rupees 30,000.

3. As respects Mr. Merrall, I would propose that on his being relieved in South Canara by Lieutenant Smalley, he should take Mr. Sage's place at Nellore, and superintend the completion of the Anicut and head works to the channels supplied by the same. Mr. Merrall will also have charge of the Workshop at Nellore, which the District Engineer is anxious to make more use of than it has been possible to do hitherto, for want of skilled superintendence.

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No. 182. ORDER THEREON, 13th November 1861, No. 2,108.

The arrangements proposed by the Chief Engineer are approved, and should be carried out without delay.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 183. Read the following Proceedings of the Madras Government in the Military Department, dated 7th November 1861, No. 4,006 :—

Deferring the completion of Block No. 4 Barracks at Wellington. } (Vide Military Proceedings, 7th November 1861, Nos. 157 @ 161.)

No. 184. ORDER THEREON, 13th November 1861, No. 2,109.

Communicated to the Chief Engineer for his information and guidance, with reference to his Memorandum, dated 8th August 1861, No. 3,698.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 185. Read the following Proceedings of the Madras Government in the Marine Department, dated 9th November 1861, No. 356 :—

Permitting Commander Hopkins, Her Majesty's Steamer "Dalhousie," I. N., to tow the Dredge Vessel to Negapatam. } (Vide Marine Proceedings, 9th November 1861, Nos. 23-24.)

No. 186. ORDER THEREON, 13th November 1861, No. 2,110.

Communicated to the Chief Engineer for his information.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 187. Read the following letter from Colonel ROBERT HENDERSON, C. B., late Madras Engineers, to J. D. SIM, Esq., Secretary to the Government of Madras, dated Madras, 12th November 1861 :—

SIR,

I have the honor to enclose copy of a Certificate showing that I have deposited with the Accountant General an Indemnity Bond signed by Messrs. Arbuthnot & Co., of Madras, and request that it may be substituted for a similar document executed by Messrs. Bainbridge, Byard, Gair & Co., forwarded to Government by Colonel Horsley, Chief Engineer, previous to my retirement from the service.

I do hereby certify that Colonel R. Henderson, C. B., of the Engineers, has furnished security from Messrs. Arbuthnot & Co., for the adjustment of the public demands standing against him.

Fort Saint George,
12th November 1861.

(Signed) F. LUSHINGTON,
*Acting Accountant General.*

(True copy.)

(Signed) R. HENDERSON, Colonel,
*Late Madras Engineers.*

No. 188. ORDER THEREON, 13th November 1861, No. 2,111.

Transferred to the Chief Engineer. The Security Bond executed by Messrs. Bainbridge & Co., was not forwarded to Government, and is probably in the Chief Engineer's possession.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 189. Read the following Telegram from Goolam Hyder, on behalf of the inhabitants of Coomara Veedhi, in Nellore, dated 13th November 1861 :—

"Collector ordered to destroy Town's fort. Convicts are doing so, thereby town will be "washed away by flood. Details will be sent by post. Session Judge must be ordered by "Telegraph to stop Convicts."

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No. 190. ORDER THEREON, 13th November 1861, No. 2,112.

Ordered that this Telegram be referred to the Magistrate for report after consulting the District Engineer, and that the following message be sent to the Magistrate :—

"Complaint is made of the destruction of Nellore Fort by Convicts, as likely to lead to "town being flooded. If there is the least danger of this, stop work and report. Complaint "goes by post."

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 191. Read the following Endorsement of the Chief Engineer, dated Chepauk, 6th November 1861, No. 6,901.

Read the following letter from Captain H. L. PRENDERGAST, District Engineer of North Arcot, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Arcot, 20th October 1861, No. 773 :—

SIR,

1. I have the honor to report, that in consequence of the great falling off of traffic on Trunk Road No. 1, I propose to effect a reduction of expenditure to the amount of Rupees 4,800 out of the allotment of Rupees 14,200 entered in Budget List No. 3 of the current year.

2. You are well aware of the condition of the road throughout this District, from your late tour in the month of August; the expenditure up to this time in the portion between the Pálár river and Vániembaddi, has been considerably below the sum allowed, reckoning that half of the year has gone by; and the expenditure I propose on this section, will be Rupees 5,200 or at the rate of 100 Rupees a mile, within a small fraction instead of Rupees 200 a mile as allowed in the Budget; there will thus be spent on the whole line of road Rupees 9,400 instead of the allotment of Rupees 14,200, giving a saving of Rupees 4,800.

3. I beg at the same time to propose a reduced maintenance allowance for this road, for entry in the Budget of 1862-63, of Rupees 7,540; and I have arrived at this total by considering the requirements of different lengths of road.

4. From the eastern extremity at the boundary of this District to the junction with Trunk Road No. 10, at Ránepet, or from 53½ to 71st mile, there is still a considerable amount of heavy traffic; and I consider that the present rate of Rupees 200 a mile is required for this portion.

17½ miles, Rupees 3,500.

5. From Ránepet to Vellore, and as far as Verinjeverum, or the 91st mile, there are still many carts met on the road; the intercourse between Vellore and Arcot being kept up to a certain degree, inasmuch as to go from Vellore to the Vellore Station, and from Arcot Station to Arcot, involves 8 miles by road, besides the Railway journey; whereas the direct distance by the Trunk Road is only 13 miles. Verinjeverum is a village of considerable importance, and holds constant communication with Vellore. I would allot Rupees 100 a mile for this portion, *i. e.*, between Ránepet and Verinjepurum, instead of the present allotment of Rupees 200 a mile.

20 miles, Rupees 2,000.

6. From Verinjepuram to Vániembaddi the traffic has almost ceased; but as a road by being left altogether untouched becomes soon totally destroyed, I would allow a small sum of Rupees 60 a mile for the next year, instead of Rupees 200.

34 miles, Rupees 2,040.

The allotment will then be:—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| From 53½ mile to 71st | Rupees | 3,500 | 17½ miles | at Rupees | 200 |
| Do. 71 do. 91st | ,, | 2,000 | 20 | ,, | ,, | 100 |
| Do. 91 do. 125th | ,, | 2,340 | 34 | ,, | ,, | 60 |
| Total | | 7,540 | | | | |

Submitted to Government with the Chief Engineer's recommendation that the reduced amount of Rupees 7,540, proposed for the maintenance of Trunk Road No. 1 in North Arcot District, be sanctioned for entry in the Budget of 1862-63 in lieu of Rupees 14,200 as entered in the Budget Statement No. 3 of the current official year.

1 Original letter.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

No. 192. ORDER THEREON, 14th November 1861, No. 2,113.

Sanctioned as proposed.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 193. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd October 1861, No. 6,284:—

SIR,

1. With reference to item* No. 175, of Budget No. 2 for the current official year, I have the honor to report for the information of Government that the District Engineer Tinnevelly in his letter, No. 130, dated 14th September 1861, has intimated to this Office, that tenders were invited by him for the completion of a portion, 2½ miles, of this road, and that the only one received was from Messrs. Cocq & Co., Merchants at Tuticorin, who have agreed to give security (Title Deeds of a bungalow, &c., at Tuticorin) to the extent of Rupees 3,500, and to bind themselves further in the sum of Rupees 3,000 to execute the work fully according to the terms of the specification.

* Completing the Trunk Cotton Road, Rupees 29,000.

2 Letters from District Engineer Tinnevelly, dated 14th September and 5th October 1861.

2. These parties, however, decline to undertake the contract on the conditions laid down in Form No. 5 appended to Chapter XVI of the new code, which, I understand from Colonel Birdwood who, at my request has had an interview on the subject with the Government Solicitor, requires that the Contractors should be bound in double the amount of the CONTRACT (in this case upwards of Rupees 41,000) for the due execution of the work undertaken by them.

3. From Captain Winscom's letter† it will be observed that there is no one in the District who will consent to undertake the completion of any portion of the road under notice, when but moderate profits are to be expected therefrom, and so heavy a penalty as that just mentioned imposed in case of failure.

† No. 148, dated 5th October 1861.

4. In reply to the District Engineer's letter dated 5th October 1861, it has been this day intimated to him that the rules laid down in the new Code under the head of "contracts" are expected by Government to be strictly conformed to; but as I am aware of the great difficulty existing in obtaining contracts at present on the terms detailed above, the system being new, I have authorized Captain Winscom to make an agreement with Messrs. Cocq & Co., for the execution of a portion of the road on the security‡ offered by them, at the same time I have informed Captain Winscom that in this case no advances should be made to the Contractors in excess of the amount of their security (Rupees 3,500), and that no further advance should be given them until an examination of the work has been made and it has been satisfactorily shown that work to the full amount of the previous advance has been executed or accounted for.

‡ Title Deeds of a bungalow, &c., valued at Rupees 3,500. Further sum for which they are to hold themselves responsible, Rupees 3,000.

5. As Government will sustain no risk or loss by the foregoing arrangement, and as it is very desirable that the road should if possible be completed during the current year, to effect which Messrs. Cocq & Co., who have an interest in the matter, will doubtless use every exertion, and as, moreover, the example set by these parties in undertaking the work is likely to prove most beneficial in inducing others to contract for the execution of Public Works, I trust that my proceedings as reported above will receive the confirmation of Government.

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No. 194. ORDER THEREON, 14th November 1861, No. 2,114.

1. The Government approve of the Chief Engineer's proceedings (as reported in paragraph 4 of this letter) in contracting with Messrs. Cocq & Co. of Tuticorin, under proper security, for taking up and working out $2\frac{1}{2}$ miles of the portion of the Cotton Trunk Road remaining to be completed. The other mile, it is observed, is being executed by the District Engineer.

2. As to the penalty required by the present form of contract, the Chief Engineer will communicate with the Law Officers of Government, and explain the cause of the requisition and the amount really recoverable, in a Circular to the District Engineers generally.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 195. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 15th October 1861, No. 5,905:—

SIR,

1. With reference to the latter part of paragraph 3 of a letter No. 139, dated 20th May 1861, from the District Engineer Madras, and letter No. 602, dated 7th August 1861, forwarded with my communication No. 5,564, dated 3rd instant, I have the honor to bring to the notice of Government that there is no maintenance allowance in the Budget for the buildings and roads at Gindi Park, and that the repairs to them are ordinarily executed from the general funds of the District.

1 Letter from the District Engineer Madras, No. 139, dated 20th May 1861.
1 Annual estimate for repairs of roads in Gindi Park Rupees 740.

2. Captain Moberly states that he can ill afford to give sums annually from this source, and urges that a sum of Rupees 6,000 for buildings, and Rupees 740 for roads, may be granted in addition to the sum allotted for his District.

3. The expenditure on the buildings at Gindi has been about Rupees 11,954 for the last two years, so that an average of 6,000 Rupees a year, as proposed by the District Engineer may be considered an ample allowance.

4. An estimate, Rupees 740, for repairing the roads within the compound of the Park is herewith forwarded, and I beg to recommend that authority may be given for inserting the same, together with Rupees 6,000 for repairs to the house, in the Budget of 1862-63.

5. The repairs to the roads in this year, within the above amount may with the sanction of Government, be met from the funds for roads not provided with special grants, for which an allowance of Rupees 12,000 is entered in the Budget of the current official year.

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No. 196. ORDER THEREON, 14th November 1861, No. 2,115.

Under the circumstances stated the Honorable the Governor in Council sanctions for entry in the Budget of 1862-63, the estimates amounting to Rupees (6,000) six thousand and (740) seven hundred and forty, for the repairs respectively of the buildings and roads in Gindi Park.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 197. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 23rd October 1861, No. 6,302:—

SIR,

1. In the course of the adjustment of the expenditure of the South Arcot District for the year 1857-58, it was discovered that a sum of Rupees 129-7-10 was retrenched in November 1858 out of a sum of Rupees 2,565-1-0, being the amount of expenditure in the construction of a bridge across the Malataur on Trunk Road No. 9.

2. The amount retrenched represented an advance made by the late Captain Heathorn in the year 1853 for chunam. When that Officer made over charge of No. 9 Trunk Road, a sum of Rupees 193-15-10 was due by six Contractors, who had supplied chunam for all the masonry works on the above road since 1851. Chunam valued at Rupees 64-8-0 was afterwards obtained from two of the Contractors, and the balance Rupees 129-7-10 could not be recovered. Of the four other Contractors two were reported by the District Engineer in a letter No. 153, dated 27th November 1858, to be dead, and two to have left the District.

From District Engineer, 19th September 1861, No. 95, and enclosure.

3. The above sum of Rupees 129-7-10, the District Engineer remarks, was the only loss sustained on the whole of the masonry works of Trunk Road No. 9, on an expenditure of nearly a lac of Rupees, and as it cannot now be recovered, I request authority may be given for writing it off to "Profit and Loss," in order that the adjustment of the expenditure of the South Arcot District for the year 1857-58 may be closed.

4. The District Engineer had overlooked the fact that the irrecoverable advance now reported upon was outstanding when writing his letter of the 17th April last, No. 222, which was forwarded to Government on the 25th May 1861, No. 855, and noticed by Government in their Proceedings No. 1,861, dated 8th October 1861, and the matter had also escaped the notice of this Office until the accounts of the South Arcot District were being adjusted, when the District Engineer was called upon for explanation, and in reply that Officer furnished copy of his letter of the 27th November 1858, No. 153, herewith sent, which contained the same.

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No. 198. ORDER THEREON, 14th November 1861, No. 2,116.

Under the circumstances stated, the Government grant authority for writing off Rupees 129-7-10, in view to an adjustment of the Public Works expenditure of the South Arcot District for the year 1857-58.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 199. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 22nd October 1861, No. 6,230 :—

SIR,

| | | | | | |
|---|---|---|---|---|---|
| Proceedings of Government, | No. | 1,216, | 28th | March | 1860. |
| Do. do. | „ | 758, | 14th | April | „ |
| Do. do. | „ | 1,886, | 6th | September | „ |
| Do. do. | „ | 1,935, | 15th | „ | „ |
| Do. do. | „ | 3,988, | 8th | November | „ |

1 Memorandum.
6 Estimates.

1. In the orders marginally noted a fixed annual expenditure was sanctioned in the Military Department for the conservancy of Bazaar roads and for minor improvements in most of the Cantonments in this Presidency, while the Department of Public Works was directed to provide for the repair of the "main "roads, bridges, drains and other substantial works" in each Cantonment. Accordingly, District Engineers were called upon, after consultation with the Military authorities, to submit estimates for the required works in the Cantonments within their Districts.

Vide my letter to Government, No. 7,547, 30th November 1860, and Circular thereon, No. CLXXI, 9th March 1861, also my Circular No. LXXVIII, dated 1st October 1860.

Vide Proceedings of Government, No. 431, 5th March 1861, No. 875, 27th April 1860, No. 700, 8th April 1861.

2. Government have already sanctioned permanent grants for the main roads, &c., in the stations of Berhampoor, Vizagapatam, and Trichinopoly ; and I have now the honor to submit six estimates, amounting in the aggregate to Rupees 4,550, for annual maintenance allowances for the Cantonments named in the margin, and to request that they may be sanctioned for immediate execution out of the several approximate sums entered for Cantonment roads in the current Budget as per margin, and that permission may be granted for the insertion of the same in future Budgets as the permanent maintenance allowance in the Department Public Works for those Cantonments.

| | RS. |
|---|---|
| Vizianagram | 310 |
| Bellary | 2,330 |
| Arcot | 530 |
| Palamcottah | 310 |
| Cannanore | 1,000 |
| Hurryhur | 70 |
| Total... | 4,550 |

| | RS |
|---|---|
| Vizianagram | 312 |
| Bellary | 2,400 |
| Arcot | — |
| Palamcottah | 1,272 |
| Cannanore | 1,000 |
| Hurryhur | — |

3. It will be observed that there is no allowance in the current Budget for the Cantonment roads at Arcot and Hurryhur ; the sums estimated for their maintenance in the present year will therefore have to be taken from the general funds at the disposal of the District Engineer North Arcot, and the Executive Engineer at Bangalore.

4. I have requested District Engineers to hasten the despatch of the estimates, required for the remaining Cantonments, and as soon as they are received I will submit them also for similar sanction. Accompanying I beg to forward a Memorandum of the Cantonments for which a maintenance is required, showing distinctly what has been done, and what remains to be provided for.

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No. 200. ORDER THEREON, 14th November 1861, No. 2,117.

The estimates submitted with this letter amounting to Rupees (4,550) four thousand five hundred and fifty are sanctioned. The sums required for the Arcot and Hurryhur Cantonments may be taken from the surplus in the Budget for Palamcottah. Authority is granted for the entry in each year's Budget of the estimates now sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 201. Read the following letter from J. J. FRANKLIN, Esq., Chairman, Pier Committee, to J. D. SIM, Esq., Secretary to Government, dated Madras, 30th August 1861, No. 16 :—

SIR,

1. I have the honor, on behalf of the Pier Committee, to forward draft of the provisions they propose to have embodied in the Madras Pier Act, and if they meet with approval, to solicit that it be transmitted to the Government Law advisers, with the view to its being rendered into legal phraseology.

2. The Tariff of tolls on goods and passengers was first submitted to the Chamber of Commerce, who expressed themselves satisfied therewith, except in two or three instances, which have been modified in accordance with their suggestions.

3. The Government will perceive that the rates set down are the maxima which the Act will allow to be levied. It is difficult as yet to say precisely what revenue they will yield, but it is believed that if two-thirds be charged, and this is all the Committee would recommend to be levied, except under extraordinary pressure, the monthly income would be about 4,000 Rupees not including any consideration for Government Stores. In their Proceedings of the 11th November 1859, No. 2,687, Government recorded their opinion that the charges to be met by the toll should be:—

(1.) The current expenses of managing and working.

(2.) The cost of repair and maintenance, including the provision of the necessary spare materials.

The Committee in framing the Tariff, have therefore not allowed for interest on capital.

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No. 202. ORDER THEREON, 14th November 1861, No. 2,118.

1. With the foregoing letter the Pier Committee forward a draft of the provisions proposed to be embodied in the Madras Pier Act, and a Tariff of the rates of toll to be levied.

2. The Government observe that the rates of toll proposed by the Committee are not calculated so as to include interest on the cost of the Pier. This is in accordance with the Orders of Government; but on a re-consideration of this point, the Government are of opinion that interest on the capital sunk in the Pier ought not to be waived. The Pier will be a heavy charge on the revenue and there will always be risk of damage in storms, its advantages are mainly local and will be great, and a fair return on the capital invested in it may justly be expected.

Dated 11th November 1859, No. 2,637.

3. It is unnecessary to provide in the Pier Act for taking possession of adjacent land, as there is an Act already for this special object.

4. It is also inexpedient that Government should be tied down to certain rates of toll, which cannot of course be changed without a fresh law. It will, therefore, be quite enough to require that the rates fixed by Government shall be made public by Notification in the Official Gazette and in the manner proposed in Section 3.

Sections 1 and 2.

5. Section 4 is also superfluous. The publication of the revenue and expenditure should be optional instead of obligatory on Government.

6. The draft will be sent with these remarks to the Law Officers of Government to be drawn up in proper legal form. The Law Officers will be at liberty also to suggest such additions and changes as may appear to them necessary in an enactment framed with the object which it has in view.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 203. Read the following Telegram from J. W. B. DYKES, Esq., Collector of Nellore, to J. D. SIM, Esq., Secretary to Government, dated Nellore, 14th November 1861 :—

"Requests favor of a reply by Telegraph to letter of the 8th instant, number forty-four, as Mr. Sage, in obedience to present orders, has laid his dawk for Monday."

No. 204. ORDER THEREON, 14th November 1861, No. 2,119.

Communicated to the Chief Engineer, with reference to Government Order, dated 11th November 1861, No. 2,096.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 205. Read the following :—

No. 6,591.

*List of Bills received from the District Engineer Presidency, for works executed on emergency, submitted for the sanction of Government.*

| Audit No. | Date of bill. | Description of work. | Amount. RS. | A. | P. | To what year's expenditure appertaining. | Remarks. |
|---|---|---|---|---|---|---|---|
| | 1861. | | | | | | |
| 152 | August 28th.. | 1st. Part Bill, repairing the floor of the Coach house with old and new granite, in Government House, Madras. | 8 | 11 | 9 | 1860-61. | Executed under the personal orders of His Excellency the Governor. |
| 154 | Do. | 1st. Part Bill, repairing the broken rails of the Government House Bridge. | 8 | 14 | 2 | do. | Undertaken at the request of the Municipal Commissioners. |
| 155 | .................. | 1st. Part Bill, repairing and white washing the walls, ceilings, floor, and painting the doors and windows and ceiling planks, &c., of the Marine Villa Bungalow in Government House Compound. | 10 | 1 | 9 | do. | Executed under the personal orders of His Excellency the Governor. |
| 156 | August 28th. | 1st. Part Bill, repairing the drain in the Kitchen at Government House, Madras. | 2 | 11 | 0 | do. | Executed under the personal orders of His Excellency the Governor. |
| 157 | Do. | 1st. Part Bill, for an old building called Chotamahal in Chepauk, for the accommodation of the married Military Students. | 28 | 7 | 7 | do. | Commenced on emergency under the authority contained in Proceedings of the Military Department of Government, dated 22nd March 1861, No. 1,103, communicated by the Public Works Department, on the 28th idem, No. 643. |
| 151 | Do. | Making certain alterations to iron door and putting up a pair of new strong batten doors with frames, lintels, &c., complete, instead of a slighter door at the Penitentiary. | 52 | 15 | 6 | do. | Sanctioned by the Barrack Master, under paragraph 82 of Section V, of new Code. |
| 108 | July 20th...... | 1st. Part Bill, repairing the floor of the Privy for the use of the Body Guard in Government House, Madras. | 8 | 5 | 6 | do. | Executed under the personal orders of His Excellency the Governor. |
| 132 | Do. | 2nd. Part Bill, repairing the floor of the Privy for the use of the Body Guard in Government House, Madras. | 5 | 6 | 10 | 1861-62. | (Executed under the personal orders of His Excellency the Governor.) |

List of Bills received from the District Engineer, Presidency.—*(Continued).*

| Audit No. | Date of bill. | Description of works. | Amount. RS. | A. | A. | To what year's expenditure appertaining. | Remarks. |
|---|---|---|---|---|---|---|---|
| | 1861. | | | | | | |
| 107 | July 20th...... | 1st. Part Bill, repairing the floor of the verandah, doors and windows, &c., of principal building in Government House, Madras, previous to re-occupation by His Excellency the Governor and family. | 250 | 4 | 8 | 1860-61. | Executed under the personal orders of His Excellency the Governor. |
| 31 | June 22nd ... | Clearing a channel in the river Kúam to admit of the Steamer "Progress" being taken to the Canal. | 125 | 2 | 0 | do. | Ordered by the Chief Engineer to admit of the Steamer "Progress" being taken to the Canal for the purpose of the trial trip with Tipping's Steamer, reported to Government on the 24th April 1861, No. 12,381. |
| 37 | Do. | Opening the Bar of Kúam river near the Marine Villa. | 100 | 8 | 5 | do. | This is an annual charge to let off the flood-waters of the Kúam. |
| | | Total...... | 601 | 9 | 2 | | |

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

Central Office of Public Works,
Chepauk,
30th October 1861.

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No. 206. ORDER THEREON, 15th November 1861, No. 2,120.

The bills are sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 207. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 14th October 1861, No. 5,860:—

SIR,

1 Report from the Assistant Master Attendant.
1 Indent for rope and pumps, amounting to Rupees 1,237-0-4.

1. I have the honor to report, for the information of Government, that the large steam Dredge intended for employment in the Negapatam Harbour, has been launched in the Kúam, and is now all ready waiting for the opening of the bar to be taken out to sea, and towed to Negapatam by either the Steamer "Coromandel" or "Dalhousie" if practicable, in all this month.

*Vide* my letters, Nos. 5,028, and 5,166, 18th and 21st September 1861.

2. As soon as the Dredge was launched I requested the Superintendent of Marine to have her carefully surveyed for the purpose of ascertaining that she was in all respects fit to go to sea, and I beg herewith to transmit the report of the Assistant Master Attendant, wherein that Officer states that the Dredge is "a strong, well-built, compact vessel of her kind, and in every way

"fitted to undertake the voyage to Negapatam in tow of a Steamer." He suggests, however, that two pumps should be fitted to the vessel in case of accident or leakage. We have some spare hand-pumps in the Public Works Stores, which with a little contrivance can be made suitable for the purpose; and I have given orders to have them at once put into the Dredge.

3. There are four anchors belonging to the Dredge, and two spare ones available, in all six, which I conclude are more than will be required. There is already a large quantity of rope and chain cable which I believe will be ample to tow the vessel to Negapatam, but in addition to this the Superintendent of Marine states that 1,200 fathom of a smaller description of rope will also be required to warp her through the bar and surf here, and as he recommends that it should be retained on board in case of being again required to haul the Dredge over the bar at Negapatam; and further as the same will be wanted there for working the Dredge and boats in the Harbour, I request sanction for the issue of the rope from my Departmental Stores, and that its stock value, viz., Rupees 1,056, may be debited to the machinery and plant in charge of the District Engineer of Tanjore. An indent is herewith forwarded for sanction for the rope and pumps.

4. The Superintendent of Marine informs me that the Dredge can be towed to Negapatam without any additional expense to Government, as one or other of the Steamers, before named, will be going southwards about the time contemplated. I have requested Mr. Franklin to bear in mind that we must look to the Marine Department to take the vessel over the bar and surf, although the Mechanical Engineers and the few available Executive Subordinates at my disposal, will of course afford all the assistance in their power.

5. There is still some heavy machinery connected with the Dredge which cannot conveniently be put into the vessel until she reaches her destination, and is in comparatively smooth water. It will, however, be sent with her in charge of a Mechanical Engineer. There are also six large sea Punts belonging to her. Four of these have already been safely despatched to Negapatam, and the remaining two will be sent with the Dredge if possible.

No. 2,232, dated 30th October 1860.

6. The Proceedings of Government marginally quoted, authorized me to incur such charges as were absolutely necessary to safely convey the Dredge to Negapatam; and the Government may depend on my incurring no expense but what is considered by me, in communication with the Superintendent of Marine, to be thus requisite, and when the total cost of fitting up the Dredge and of conveying her to Negapatam is known, I will report the same for the sanction of Government.

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No. 208. ORDER THEREON, 15th November 1861, No. 2,121.

1. The Government sanction the indent for pumps and Europe rope, submitted with this letter, for the use of the steam Dredge to be employed in the Negapatam Harbour, at a total value of Rupees 1,237-0-4.

2. As requested in paragraph 3, the rope will be issued from the Departmental Stores, and its stock value, viz., 1,056 Rupees, will be debited to the machinery and plant in charge of the District Engineer of Tanjore.

3. The Government will await the report promised in paragraph 6.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 209. Read the following :—

No. 6,589.

*List of Bill received from the District Engineer of Salem, for work executed on emergency, submitted for the sanction of Government.*

| Audit No. | Date of Bill. | Description of work. | Amount. Rs. | A. | P. | To what year's expenditure appertaining. | Remarks. |
|---|---|---|---|---|---|---|---|
| 30 | 1861 April 3 | Repairing the road from Salem to Sooramangalum Railway Station. | 1,534 | 6 | 4 | 1860–61 | This road was greatly injured by the water of two breached tanks in August 1860, as reported by the District Engineer in his letter, No. 107, dated 31st August 1860, submitted for the information of |
| | | Total... | 1,534 | 6 | 4 | | |

Government under date 5th September 1860, No. 4,474. On the day on which the road was damaged 4 inches of rain fell in the town and neighbourhood of Salem. An emergent estimate of Rupees 1,670 was forwarded by the District Engineer on the 25th October 1860, for the work in question; but the repairs were then said to be nearly completed. As it was stated that the tanks were Mootah tanks, the District Engineer was called upon to report whether the Order of Government of 2nd October 1860, No. 2,048, did not apply equally to those in Salem, the breaching of which had caused the damage to the road, and in that case whether the Collector would be able to obtain the funds for repairing the damage from the proprietors of the two breached tanks. In reply he stated, that the Collector as well as himself were of opinion that the proprietors of the tanks could not fairly be held answerable for the damage caused to public works by such an extraordinary fall of rain, following as it did upon a fortnight of heavy showers.

The repairs were executed on emergency as it was necessary to keep open the communication between the town of Salem and the Railway Station.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

Central Office of Public Works,
Chepauk, 30th October 1861.

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No. 210. ORDER THEREON, 15th November 1861, No. 2,122.

The bill is sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 211. Read the following Endorsement of the Chief Engineer, dated Chepauk, 29th October 1861, No. 6,559.

Read the following letter from Captain R. F. OAKES, District Engineer, Tanjore, to Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Tanjore, 4th October 1861, No. 165:—

SIR,

1. I have the honor to inform you that the Accountant in the Range Office of No. 5, Shanmuga Mudali, has been offered an appointment in the Commissariat Department Toonghoo, where he has been for some years employed. His salary is to be Rupees 120 per mensem, and he has submitted his resignation of his appointment in the Department Public Works.

2. One Daniel Pillai, who was appointed to the Department Public Works in September 1856, and who held the post of Accountant in Range No. 3, from the 1st November 1859, to the 1st March 1861, when he resigned his appointment with a view of obtaining a post in the

Judicial branch of the public service, is now anxious to return to the Department Public Works: under the Notification published in the "Fort Saint George Gazette" of the 19th August 1861, I presume, I am not at liberty to appoint him; his qualifications do not come up to the standard laid down in that Notification, for he draws but little, and he can only prepare estimates for small works; he has been reported upon favorably by the Officers in the Department Public Works under whom he has been employed. He is 25 years of age, and was for 4 years and 5½ months in the Department Public Works.

Page 253.

3. Should his entertainment as an Accountant be inadmissible under the Notification referred to above, I beg you will be good enough to ask the Principal of the Civil Engineering College to send down a properly qualified person from Madras, or to furnish me with a list of the Candidates who have qualified for the post with their addresses, for it is probable that Shanmuga Mudali will lose his appointment in the Commissariat Department at Toonghoo, if he does not join shortly.

4. The vacant post in the Department Public Works is in a 2nd Class Range Office, and the salary is therefore Rupees 40 per mensem.

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1 Original letter. 1. Submitted for the information of Government.

2. The Chief Engineer has learnt from Lieutenant-Colonel Carpendale, that he is unable at present to nominate any person from the College, qualified under the Notification of the 19th August 1861, to take up the appointment of Accountant now vacant in the Office of No. 5 Range in the Tanjore District, and as Daniel Pillai is represented to have performed the duties of Accountant in No. 3 Range from 1st November 1859 to 1st March 1861, and to have been well reported on by the Officers under whom he was employed in the Department of Public Works, and as, moreover, Colonel Birdwood bears the most favorable testimony to his character and usefulness as a public servant, the sanction of Government is requested to his appointment to the vacant post without passing the prescribed examination.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 212. ORDER THEREON, 15th November 1861, No. 2,123.

Under the circumstances brought to notice, the Government grant permission for Daniel Pillai being employed as Accountant in No. 5 Range of the Tanjore District for a period of twelve months, subject to report at the end of that period as to whether a passed candidate is not available for the permanent appointment.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 213. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 1st November 1861, No. 6,758:—

SIR,

Major Rawlins, Assistant to the Chief Engineer, having applied for two months Cumulative Privilege Leave from the 6th November 1861, I have the honor to recommend that during his absence Lieutenant Tulloch, 1st Assistant District Engineer Presidency, may be allowed to officiate for him, in which case Mr. Sub-Engineer Walsh will be directed to take charge of the works in Fort Saint George, as was done when Lieutenant-Colonel Hitchins obtained Privilege Leave for two months in April last.

G. O. G. 16th April 1861, page 511.

No. 214. ORDER THEREON, 15th November 1861, No. 2,124.

The arrangements proposed by the Chief Engineer, are sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 215. Read the following:—

No. 6,654.

*List of Bills received from the District Engineer of North Canara, submitted for the sanction of Government, which exceeds its estimate by more than 5 per cent.*

| Audit No. | Date of bill. | Description of works. | Amount of estimate. RS. | A. | P. | Amount of bill. RS. | A. | P. | Excess. RS. | A. | P. | Per centage of excess. | To what year the expenditure appertains. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 1861. June 27th ... | 2nd part or final bill, for constructing Munsif's Court at Coondapoor, sanctioned by Government, dated 8th October 1858, No. 2,089........ | 1,690 | 0 | 0 | 717 | 3 | 5 | ...... | ... | ... | | 1860-61. | The District Engineer attributes the excess in this bill to the late Mr. Machado, who had charge of the work, having protracted the expenditure over two seasons instead of completing the work in one, and this necessitated the erection of a temporary roof over the structure during the monsoon of 1860, at an extra cost. The increase of rates since the estimate was framed has also contributed towards the excess. |
| | | Add amount of the 1st part bill for do. do., passed by the Chief Engineer on the 29th May 1860...... ......... | ...... | ... | ... | 1,074 | 12 | 7 | ...... | ... | ... | | 1859-61. | |
| | | Total........... | 1,690 | 0 | 0 | 1,792 | 0 | 0 | 102 | 0 | 0 | $6\frac{1}{32}$ | | |

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

Central Office of Public Works,
Chepauk,
31st October 1861.

No. 216. ORDER THEREON, 15th November 1861, No. 2,125.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 217. Read the following Endorsement of the Registrar to the Court of Sudder Ádálat, dated 9th November 1861, No. 113.

Read the following letter from T. ONSLOW, Esq., Civil Judge of Guntoor, to C. F. CHAMIER, Esq., Registrar to the Court of Sudder Ádálat, dated Guntoor, 1st November, 1861, No. 27 :—

SIR,

With reference to the Proceedings of the Madras Government, dated 15th ultimo, No. 1,903, I have the honor to inform that at present I see no objection to the Assistant Supervisor in charge of 2nd Circle, Kistna District, occupying the tiled building situated at Chabrole as an Office, as it is not now required, and will not be unless any unforeseen changes occur.

(True Copy.)

(Signed) C. F. CHAMIER,
*Registrar.*

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Forwarded to Government, with reference to their Proceedings of the 15th ultimo, No. 1,903.

By order of the Court,

(Signed) C. F. CHAMIER,
*Registrar.*

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No. 218. ORDER THEREON, 15th November 1861, No. 2,126.

1. Communicated to the Chief Engineer, with reference to the Order of 15th October 1861, No. 1,903.

2. The building may be permanently transferred to the Department Public Works.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 219. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th October 1861, No. 6,622 :—

SIR,

1. I have the honor to submit for the sanction of Government, the accompanying bill amounting to Rupees 10, for six camp stools purchased by the District Engineer of North Canara, for the use of his Office establishment.

1 Original letter, dated 12th August 1861, No. 85, with bill and voucher.
1 Do., dated 12th October 1861, No. 122.

2. Captain Walker explains that no estimate was submitted for these stools, "they "were purchased just as his camp was leaving Sircy after the monsoon of 1860, to obviate the "loss by breakage inevitably ensuing from the carriage of chairs in carts;" and under these circumstances, I have the honor to request that the bill may be sanctioned.

3. In June 1860 a bill for Rupees 95 was passed by the Civil Auditor for furniture purchased by Captain Walker for his Office establishment, the whole of the furniture belonging to the old Canara District having been retained in South Canara when the division of the Districts was carried out. The total expense, therefore, incurred for furniture for the District Engineer's Office in North Canara, is Rupees 105, and this amount, it will be observed, is 5 Rupees in excess of the sum I am authorized* to pass.

* Clause V, Paragraph 1, Chapter XXIV, of the New Code.

4. The bill now furnished is the duplicate of one submitted to the Central Office Public Works in September 1860, but which was mislaid by one of the parties referred to in paragraph 2 of my letter of the 14th September 1861, No. 4,906, regarding the Santagol Bungalow, and who, as therein stated, has been well punished by me for his great carelessness.

5. The bill for Rupees 36, submitted by the District Engineer of North Canara, with his letter of the 12th October 1861, No. 122, for furniture obtained for the Hullial Range, has been forwarded to the Civil Paymaster for audit, under the Orders of Government, dated 30th July 1859, No. 1,832.

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No. 220. ORDER THEREON, 15th November 1861, No. 2,127.

The bill of Rupees (10) ten, submitted with this letter is sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 221. Read the following :—

No. 6,588.

***List of Bills received from the District Engineer of Bellary for works executed on emergency, submitted for the sanction of Government.***

| Audit No. | Date of Bill. | Description of work. | Amount. RS. | A. | P. | To what year's expenditure appertains. | Remarks. |
|---|---|---|---|---|---|---|---|
| | 1860. | | | | | | |
| 231 | Nov. 26th.. | Constructing a Gram boiling Shed, for the use of the D. Troop Horse Artillery. | 100 | 13 | 3 | 1860-61. | These works were ordered on emergency by the Major General Commanding the Division, and were carried out by the District Engineer as such. They do not come properly under the category of emergent works, nor can any of them be regarded in the light of works affecting the health |
| 232 | Do. 26th. | Constructing a Surgery and Farrier's room for the use of do. | 141 | 5 | 9 | Do. | |
| 117 | Sept. 29th.. | Constructing two Cook-rooms and two necessaries for the use of the Serjeant Major and Quarter Master Serjeant of the do. do. | 133 | 5 | 7 | Do. | |
| | | Total... | 375 | 8 | 7 | | |

of the Troops. The District Engineer appears to have undertaken these as " minor new works," but his attention has been called to Circular No. 76, dated 25th August 1859, for an explanation of the term, and the irregularity has been noticed.

Central Office of Public Works,
Chepauk,
30th October 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 222. ORDER THEREON, 16th November 1861, No. 2,128.

1. The bills are sanctioned.

2. The Chief Engineer has properly noticed the irregularity of the District Engineer's proceeding in having executed these works without the sanction of Government.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 223. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 26th October 1861, No. 6,470:—

SIR,

1 Letter from District Engineer South Canara, No. 80, dated 10th August 1861, with one enclosure.
1 Plan of Well No. 2.
1 Petition from Gumáshta Nursappa.
1 Letter from District Engineer South Canara, No. 81, dated 13th August 1861, with one enclosure.
1 Do. No. 97, dated 29th August 1861, with the estimate and specification.
1 Copy of Proceedings of this Office, No. 4,160, dated 21st August 1861.

* From District Engineer, 10th August 1861, No. 80.
Do. 13th „ do. „ 81.
Do. 29th „ do. „ 97.

1. With reference to the Proceedings of Government, No. 1,648, dated 30th ultimo, I have the honor to forward herewith the letters as per margin,* containing the explanation of the parties concerned in the construction of Well No. 2 in Bolur Maidan, in the Cantonment of Mangalore.

2. Mr. Gowdie's explanation of his conduct is to the effect:—first, that he understood the coloring on the plan furnished for his guidance to prescribe the use of laterite *in mud* on the outside of the well, and that had it been intended to use *chunam* the estimate would have been insufficient; second, that he had not been furnished with a specification; third, that the District Engineer had altered the plan; fourth, that he never gave any orders to the Gumáshta to build the other three sides with mud instead of chunam, as had he done so the quantity used would have been less than that entered in the accounts.

3. On the above, the District Engineer remarks, that there would have been no insufficiency in the estimate, had not Mr. Gowdie been obliged to re-build a portion of the wall twice, but he admits that the plan was slightly altered by himself, in order to afford easier means of drawing water. Mr. Gowdie's statement regarding the quantity of chunam, the District Engineer states is without foundation, as the accounts exhibit, instead of an excess, a deficiency in the quantity of that material used.

4. Accompanying the District Engineer's letter of 10th August, is the defence of the Gumáshta, who urges that he was furnished with neither plan nor estimate and acted only on verbal orders from Mr. Gowdie, and that he himself was in a very subordinate position; and to prove the incorrectness of Mr. Gowdie's statement, he adds, that he ought to have interpreted the coloring on the plan above alluded to, to convey the same meaning throughout, and not supposed it to represent mud in one place and chunam in another. If there had been any room for doubt on this point, it might have been at once set at rest by a reference, seeing that the work in question is in the town of Mangalore, the head quarters of the District Engineer himself.

5. The Gumáshta attempts to meet the charge made by the District Engineer of having profited by the difference in cost between stone in mortar and stone in mud, by asserting that the actual quantity of chunam used was less than what, according to the ordinary rate, would be required for the number of stones used for the revetment on the north-east and south sides, but the District Engineer shows that the rate spoken of is incorrect, and that it is not the rate ruling in the District.

6. In reply to the enquiry why a Gumáshta was placed in charge of the work, Captain Moberly explains that "there is much difficulty in getting Superintendents for work, either qualified or trustworthy, and his appointment in the office seemed to afford additional security."

7. A reference to the District Engineer's Inspection Report, shows that he inspected the work in March, April and May last, but though measurements of work are given in the latter month no remarks are made as to the manner in which the work was executed. The Progress Reports likewise contain nothing on that head, and therefore it would appear that the District Engineer was satisfied as to the quality of the work.

8. On a review of the correspondence I am of opinion that the party to blame is Mr. Gowdie, and not the Gumáshta. The work itself was not one of such importance as to necessitate the personal superintendence of the District Engineer himself, and though, as it was

situated at his head quarters, and he could therefore have visited it oftener than he did, yet the principal portion appears to have been executed during his absence in the District, and it was a work which he might certainly expect a competent Overseer to superintend. Mr. Gowdie, whose failure I shall have to represent to Government in another work entrusted to him, I consider unfit for the Department, and shall therefore order his dismissal.

9. There is nothing to show that the Gumáshta actually profited by any fraud in the building, and he appears throughout to have been placed in an anomalous position, appointed apparently to ensure trustworthy work, and at the same time made subordinate to a man who is certainly incompetent, and whom the District Engineer has himself subsequently shown to be untrustworthy.

10. The District Engineer forwards the accompanying estimate amounting to Rupees 390 for re-building the revetment of Well No. 2, and recommends that the cost be recovered jointly from Mr. Gowdie and the Gumáshta.

11. Were the former to be retained in the Department, the cost should be recovered from him, but as dismissal from the Department is in itself a heavy punishment, I do not recommend the recovery of the entire cost from him also, and the Gumáshta I do not consider to have been responsible, inasmuch as he appears to have only acted under the orders of his superior.

12. I therefore request the Government will be pleased to sanction the above sum of Rupees 390, to be met from the general funds at the District Engineer's disposal.

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No. 224. ORDER THEREON, 16th November 1861, No. 2,129.

1. It appears clear from this letter and its enclosures, that Sub-Overseer Gowdie and not the Gumáshta, is the party to blame for the use of mud instead of chunam, in the construction of the revetment of Well No. 2 in Bolur Maidan, in the Cantonment of Mangalore.

2. As the Chief Engineer intends ordering Mr. Gowdie's dismissal from the Department, the Government will not require the cost of re-building the revetment to be made good by that individual; but sanction the estimate of Rupees (390) three hundred and ninety, now submitted for the purpose for execution out of the general funds of the South Canara District. The amount and date of sanction of the former estimate ought to have been stated.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 225. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 9th October 1861, No. 5,751 :—

SIR,

1. In reply to paragraph 6 of the Order of Government, dated 12th ultimo, No. 1,702, I have the honor to furnish the following explanation, with respect to the Salt pan roads in the Ganjam District.

2. The undermentioned estimates called for in Extract Minutes of Consultation of the 19th November 1857, No. 2,128, and in Proceedings of Government, No. 901, of 7th July 1859, were sanctioned in the Order of the 13th August 1859, reviewing letter from this Office, 18th July 1859, No. 2,822, which referred to Extract Minutes of Consultation of the 19th November 1857, No. 2,128, and which is one of those entered in list of unanswered references :—

| | RS. |
|---|---|
| Road from Naupada to Bomally........................................ | 10,500 |
| Budget No. 2 of 1860-61, Item No. 133. | |
| Umeravally Salt pans, to Junction with road to Chicacole............ | 4,400 |
| Budget No. 2, Item No. 134. | |
| Naupada to Teckelly.................................................. | 5,330 |
| Item No. 132. | |

Extract Minutes of Consultation, 9th September 1859, No. 2,167.

3. The estimate of Rupees 9,060, objected to in paragraph 4 of that Order, was subsequently sanctioned and forms Item No. 135, of Budget No. 2 of 1860-61.

4. With reference to paragraph 4 of the Order of Government, dated 7th July 1859, No. 901, pointing out the expediency of constructing a road from the Port of Calingapatam to the Umeravally Salt pans, I beg to explain that an estimate for Rupees 4,300 was submitted for that work on the 9th November 1860, No. 6,824, but the Government in their Orders of the 22nd idem, considered it unnecessary to sanction the same, as there were many road improvements in the Ganjam District which, though much required, were unavoidably postponed for want of funds.

5. With regard to the road from Bomally to Juggernáthpúram, I beg to append the District Engineer's remarks,* upon which those entered in the unanswered reference list were based:—

* *Vide* District Engineer's letter, No. 2,034, dated 15th October 1860.

"In letter No. 272, 18th October 1858, I proposed further examination of the Juggernáthpúram line. I should have sent in an estimate long ago had there been the smallest chance of its being sanctioned. An estimate can be made this cold season. The country is now impassable. Meanwhile, my Budgets are full of estimates for important works, the execution of which seems hopeless. Works in progress are so sadly impeded by want of funds as to be *years* in hand, when *months* might have finished them."

6. It will thus be seen that the only estimate still to be submitted is that for the extension of the road from Naupada Pans, viâ Bomally to Juggernáthpúram, a village on the line from Chicacole to Pálcondah, which the Government, in their Order of the 13th August 1859, No. 1,949, paragraph 2, requested might be submitted separately after further examination of the line, and which the District Engineer was directed to do in Proceedings of this Office No 3,909, dated 16th August 1859, but which, as above explained, he has not yet done. Captain Harington has again been requested to prepare and submit an estimate as soon as practicable.

*Vide* Order, No. 2,128, 19th November 1857, paragraph 7.

7. Under this explanation, I trust that the censure which the Government thought it proper to convey in Proceedings, No. 702, dated 12th September 1861, may be removed.

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No. 226. ORDER THEREON, 16th November 1861, No. 2,130.

Colonel Horsley's explanation is accepted. The District Engineer ought however to have sent in the estimate as ordered.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 227. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 11th November 1861, No. 60 :—

SIR,

1. With the accompanying letter* the Agent forwards plans and estimates amounting in aggregate to Rupees 12,44,500 for 54 miles of the main canal or from the 18th mile, where it leaves the right bank of the Hindri to the 72nd where it reaches the watershed which separates the Tumbaddra from the valley of the river Kundár.

* No. 468 of 24th October 1861.

2. In his descriptive Memorandum† accompanying the estimates, the Chief Engineer states that he has divided this section of the canal into five portions, in order to facilitate the division of labor and capability of

† Dated 14th October 1861.

supervision. The first of these, viz., that from Sunkasala to the Hindri or from the 1st to the 17th mile, has already been sanctioned ;‡ those included in the present estimates are as follows :—

‡ 31st May 1861, No. 1,016.

| | | | Rs. |
|---|---|---|---|
| 2nd Portion | from 18th to 32nd mile | ........................ | 5,34,000 |
| 3rd ,, | ,, 33rd to 43rd ,, | ........................ | 1,88,500 |
| 4th ,, | ,, 44th to 60th ,, | ........................ | 2,73,500 |
| 5th ,, | ,, 60th to 72nd ,, | ........................ | 2,48,500 |
| | | Total...... | 12,44,500 |

Of the above, I at present forward only the estimates for the 2nd and 3rd, for though the others have been received by me, there has not been sufficient time to examine them, and I am unwilling to delay the submission of the first two portions, as the Chief Engineer has informed me that there are substantial contractors waiting to take them up as soon as the Government sanction has been received.

3. The accompanying sketch map on a scale of 1 inch to the mile, shows the direction of the canal marked yellow, the position of the various masonry works marked red, and the portions of irrigable land tinted green.

4. The canal, it will be seen, runs parallel and close to the Tumbaddra till it reaches the village of Sultanpoor, and from thence begins to trend gradually away until it reaches Nagatore, situated on the watershed which separates the valleys of the Tumbaddra and Bowanassy ; from whence it runs parallel to the latter stream, until it reaches the next watershed which separates both the abovementioned valleys from that of the river Kundár. The sketch for the latter portion will accompany the estimates when they are submitted.

5. For nearly the whole of this distance the canal runs along the steep slope of the country, and is carried with a single embankment except at those spots where it is taken across short projecting spurs, or where a double embankment is absolutely necessary. It thus presents the appearance of a series of tanks connected by short cuts, its course therefore is much less direct, and consequently its length is considerably increased. The Chief Engineer states that he preferred carrying the canal with these détours to adopting a more direct course, as thereby nearly all rock cutting is avoided, and considerable expense saved, and that though there are twelve miles added to the distance to be navigated, yet the windings diminish the extent and cost of distributing branches required for irrigation, which in this portion of the canal will not cost more than one-third of the sum originally estimated at Rupees 3 per acre.

6. On the sketch the general direction of the principal distributing branches is shown in dotted red lines. The irrigable lands have not been fully surveyed, but the green tinted portions on the plan show approximately the extent that will be commanded.

7. In the Chief Engineer's report this extent was reckoned at 60,000 acres.

8. Of this quantity 30,000 acres are shown east of the Bowanassy, and from the information already acquired, the Chief Engineer has been able to lay down the branch Channel for that side of the Bowanassy, which stream it will cross by an Aqueduct or Anicut below Atcoor, and have a command over about 33,000 acres.

9. The distribution to the east of the Bowanassy will cost about two Rupees, while that on the west will not cost more than one Rupee, so that as the areas are about equal, the average rate will be 1½ Rupees per acre.

10. The arrangements for carrying off the intercepted drainage consist of Culverts and Calingulahs. The precise sites of the latter will be fixed when the rock is at an appropriate level both for the foundations and for receiving the overfall, but they will be nearly where they are shown on the sketch. An arrangement has also been provided for discharging the whole water of the canal in four places when necessary by openings in the Calingulahs.

11. The total amount of water-way afforded by the Calingulahs is 3,599 feet in the distance of 54 miles, the drainage area provided for being 120 square miles.

12. The Chief Engineer contrasts the estimates of this, the first section of the project, with those given in his letter of the 19th October 1860, and shows that they closely approximate to the former, amounting to Rupees 22,99,500, the latter to Rupees 22,95,000. The value of all the stone which is quarried along the line is not taken into account, but it will no doubt be considerable when water carriage provides for its transport to the coast.

13. The rates in the estimate are sufficient, being similar to those allowed in the portion already sanctioned, and tested by the readiness with which contracts have been taken and the numbers resorting to the works.

14. On comparing these detailed estimates with the Chief Engineer's original rough estimate mentioned above, the item for earthwork exceeds it, that for masonry falls within it. The excess in the excavation is owing to the peculiar structure of the country, rock under-lying the surface throughout, a circumstance which is favorable on the other hand for the masonry works; and so the aggregate cost of this section which forms nearly one-fourth of the whole project approximates nearly to the original rough estimate. I would here observe, that the Chief Engineer when making the comparison has entered the cost of the Aqueduct at Rupees 1,45,000 instead of Rupees 1,85,000, the amount sanctioned in Proceedings No. 1,864 of 8th October 1861. This arises from an alteration in the alignment of the work which could not be originally made, owing to a dislike on the part of the inhabitants to have a Mosque cut off from the Town ; but this difficulty having been overcome the Chief Engineer has been able to take advantage of the site which admits of considerable saving in the approaches, and so reduces the cost, and the particulars of which he has informed me will shortly be forwarded together with the revised estimate.

15. The Chief Engineer also states that the plans and estimates for the Nellore, or last section of the work are ready, and amount to 13½ lacs or 3 lacs less than the sum allowed in his rough estimate, also that the surveys of the intermediate sections, comprising the Kundár and Pennár Divisions, indicate no difficulties of importance, and afford every confirmation of the sufficiency of his original estimate ; and he therefore requests permission to submit the estimates of the Nellore section for immediate sanction, as it is of importance that the Anicut across the Pennár should, if approved, be commenced at the close of the monsoon ; he states that he has received large offers of labor from Madras, which would be made available for the Nellore works. At the date of his letter he adds, there were 14,000 men on the Canal between Sunkasala and Kurnool, and that the number was daily increasing, and so he infers that if the work were allowed to proceed over the whole length, there would be a proportionately large amount of labor available.

16. As the estimates for the first and last section have been completed, and the sufficiency of the rates attested by the willingness with which contracts have been taken and the numbers employed, and as these estimates so far fall within the Chief Engineer's rough estimate, there are fair grounds for concluding that the estimate for the remaining portions will likewise prove sufficient.

17. I would, therefore, beg to recommend that permission be granted for the estimates for the Nellore section being submitted, as their examination in my Office must necessarily occupy some time, and during that period, so much more of the present works will have been in active operation for six months, and will probably have so far progressed, as to enable the Government to satisfy themselves that all the rest can be safely undertaken without exceeding the guaranteed amount.

18. As the sketch plans and sections accompanying this letter explain generally the directions of the Canal and the dimensions of its embankment, as well as the design of the masonry works, I have not thought it necessary to forward also the mass of large plans in which all the details of the land occupied are laid down, as the labor of making duplicate copies would be very considerable, and they are useful chiefly as land plans and working drawings, and therefore not required for submission to Government. In order to avoid delay, I have sent on the plans for the Government approval before taking copies, and therefore request that they may be returned to enable me to prepare as many as the Government may require.

19. The District Engineer of Kurnool has explained,* that with the exception of 12 acres at Kadrabagh for which a small sluice will be wanted no irrigation is intercepted, but he was of opinion that another bridge will be required at the point where the Cumbum road crosses the Canal and where only a ferry boat had been provided, stating that this is the point where the third bridge out of the four mentioned by the late District Engineer is required. This road however goes to the village of Jorampoor, and crosses into Kurnool by a comparatively unfrequented ford and the main traffic passes along the made road which leads to the bridge over the Hindri. To accommodate this traffic, the diversion of the road shown in the sketch has been made, and as I am well acquainted with the locality, I am of opinion that this bridge is not so absolutely necessary, but I referred the point again to the District Engineer, and should he still consider that the interests of the public require it, I will request the Chief Engineer to carry it out accordingly.

* *Vide* letter No. 614, of 17th October, herewith sent.

20. The drainage regarding which the District Engineer speaks, I consider has been adequately provided for.

21. I would conclude by requesting that the amount for the estimates, herewith forwarded, for the portion between the 18th and 43rd miles and amounting to Rupees 7,22,500, may receive early sanction.

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No. 228. ORDER THEREON, 16th November 1861, No. 2,131.

1. The Consulting Engineer is requested to report whether he has carefully considered what will be the effect of extending the surface of the water in the Canal over so great an area. The loss by evaporation and soakage must be very large, and much land will be submerged which might otherwise be made available for cultivation.

2. The Government deem it inexpedient to permit the submission of the plans and estimates for the Nellore section, until they have before them the necessary plans and estimates for the intermediate works. These will afford ample employment, and it is desirable that the estimates should be tested by practical experience before they are implicitly accepted.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 229. Read the following letter from Lieutenant-Colonel CUTHBERT DAVIDSON, C. B., Resident at Hyderabad, to J. D. SIM, Esq., Secretary to Government, dated Hyderabad Residency, 8th November 1861, No. 1,725 :—

SIR,

1. In compliance with the request contained in your letter of the 30th ultimo, No. 2,015, I have the honor to enclose an Akkam received from His Highness the Nizam's Minister, directing the Tálookdar of Chinnore Mapeodeopoor to make over the land required in the Hyderabad territory for the construction of the roads alluded to.

2. I beg that in future, applications for grants of land in the Hyderabad territory, may include the name of the Táluq in which the land required is situated.

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MY DEAR FRIEND,

From the letter of the illustrious gentleman Bahadoor (may his kindness ever endure), and also from the letters of the Government of Madras enclosed in the former, it has been known that the construction of a Railway on the side of Godavery river is now needful for the commencement of merchandize, which is reasonably supposed to be beneficial to both Circars. It is therefore that, that on the demand, of the Officers of the said Government, for the land belonging to

the high Circar for the construction of the aforesaid Railway, you should immediately deliver up the said land to them and report the Circar. What shall be written more.

(On the envelope)

Concerning the delivery of a certain piece of land attached to the Circar to the Officers of the Government of Madras, for the construction of a Railway on the side of Godavery river and to report the same to the Circar.

Dated 4th Jamadee-ool Aval 1278 Higeree

To kind friend,
MIRZA HASHIM BAIG.

Translated by
S. M. ZAKIR,
*Translator in Government Office.*

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No. 230. ORDER THEREON, 16th November 1861, No. 2,132.

1. This letter, together with the Order and its translation, will be forwarded (through the Chief Engineer) to Captain Haig for information and guidance, with reference to paragraph 6 of the Order of Government 30th October 1861, No. 2,013, and with instructions to have the Order delivered to the addressee.

2. Captain Haig will bear in mind the requisition in paragraph 2 of Colonel Davidson's letter.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 231. Read the following Circular from Lieutenant-Colonel A. G. GOODWYN, Under Secretary to the Government of India (General), to J. D. SIM, Esq., Secretary to the Government of Fort Saint George, dated Fort William, 30th October 1861, No. 97:—

SIR,

1. I am directed by his Excellency the Governor General in Council to state, for the information of the Government of Madras, that the sum which the Government of India will probably be able to assign for Public Works expenditure in the Madras Presidency for 1862-63, is sixty-eight lakhs including four lakhs for the Godavery works. Additional works affording some latitude of selection, and marked A, may be entered in the Budget, but the totals should be prepared irrespective of them.

2. With reference to Proceedings of the Government of India in the Financial Department, of which an extract, No. 11,950 of the 26th ultimo, is herewith forwarded for information and guidance, I am directed to request that the Government of Madras will note in its Budget the portion of the entire Public Works grant for 1862-63, which the one per cent. Income Tax for that year is expected to cover, and that particular works, representing that estimated amount as nearly as may be, be marked by the letter B.

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Extract from the Proceedings of the Government of India, in the Financial Department, under date the 26th September 1861, No. 11,950:—

Read Office Memorandum of the Public Works Department, No. 3,309, dated the 14th September 1861, enquiring what amount can be allotted out of the Imperial Revenues for expenditure on Public Works in the year 1862-63.

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RESOLUTION.—His Excellency the Governor General in Council is pleased to direct that 367½ lakhs be provisionally assumed as the amount (exclusive of Local Funds, but inclusive of the one per cent. Income Tax Fund) to be expended on Public Works in 1862-63.

His Excellency in Council desires that the Public Works Department be requested to instruct the Local Governments to state distinctly in their next Budgets what proportion of the sum allotted to them out of the said Budget grant for all India, of 367½ lakhs, will be covered by the one per cent. Income Tax Fund; distinguishing the works to be executed from that Fund from those to be executed from the remainder of the said grant of 367½ lakhs.

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ORDER.—Ordered, that a copy of this Resolution be sent to the Public Works Department for information and the issue of further orders.

(A true Extract.)

(Signed) C. H. LUSHINGTON,
*Secy. to the Govt. of India.*

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No. 232. ORDER THEREON, 16th November 1861, No. 2,133.

1. Ordered to be communicated to the Chief Engineer for his information and guidance. The additional works over and above the limit now assigned for the Budget and those proposed to be executed from the proceeds of the one per cent. Income Tax, should be carefully distinguished in the Budget by letters A and B respectively.

2. The Board of Revenue will, after consultation with the Madras Commissioners and Accountant General, inform Colonel Horsley of the probable collections on account of the one per cent. Income Tax in 1862-63. A copy of the letter to the Government of India, dated 11th October 1861, No. 1,967, which explains the views of this Government in regard to the appropriation of this portion of the tax this year, will be furnished to the Chief Engineer for his information.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 233. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 14th November 1861, No. 7,196:—

SIR,

1. In reply to the Proceedings of Government, No. 2,096, dated 11th November 1861, forwarding for my consideration a letter from Mr. Dykes, Collector of Nellore, protesting against the removal of Mr. Sage from that District at the present time and giving his reasons for so doing, I have the honor to report for the information of Government, that it was not without due consideration and consultation with the Deputy Chief Engineer Northern Circle, Lieutenant-Colonel Rundall, that I recommended the transfer of Mr. Sage to the Godavery District. Both Colonel Rundall and myself considered that it was absolutely necessary a thoroughly efficient Executive Officer should be sent to take the place of Captain Searle at Ellore, in the vicinity of which town a large Aqueduct is under construction to convey the high level Canal from Bezwada to Dowlaishwaram over the Tumulairu. This Aqueduct is a work of considerable magnitude as well as difficulty, and the opening of the Canal is dependent on its speedy and satisfactory completion.

2. The Anicut across the Pennár at Nellore is also a most important work, in the execution of which Mr. Sage has manifested great skill as an Executive Officer, and had it not been that the exigencies of the service required it and that no other Officer of equal experience was available, I should not have recommended his removal until it had been fully completed. But

seeing that very little comparatively remains to be done, and that the District Engineer is himself on the spot to direct the work, and has a skilled Overseer, Serjeant Wiffin, to superintend operations, I do not think that the interests of Government are likely to suffer by the removal of Mr. Sage to the Godavery District, and in this opinion Colonel Rundall, who visited the Anicut in June last and knows its present state and requirements, coincides.

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No. 234. ORDER THEREON, 18th November 1861, No. 2,134.

The Government are satisfied with the Chief Engineer's explanation.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 235. Read the following Proceedings of the Madras Government in the Public Department, dated 14th November 1861, No. 1,522:—

Communicating a letter with its enclosures from the Principal Inspector General Medical Department, in view to the District Engineer of Coimbatore, being required to submit the plan and estimate called for, of a building for a Dispensary and Civil Hospital at Ootacamund. } (Vide Public Proceedings, 14th November 1861, Nos. 69-70.)

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No. 236. ORDER THEREON, 18th November 1861, No. 2,135.

1. Communicated to the Chief Engineer for his information and guidance.

2. Colonel Horsley will submit the plan and estimate of the building in question at an early date.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 237. Read the following Proceedings of the Madras Government in the Marine Department, dated 11th November 1861, No. 364:—

Read the following letters from the Commander of the "Dalhousie."

(Here enter 11th November 1861, Nos. 241 and 242.)

1. Communicated to the Superintendent of Marine and to the Public Works Department.

2. Commander Hopkins will proceed to Cocanada and carry out the rest of the orders conveyed in Proceedings 7th November 1861, No. 354, as soon as he has on board the stores and Officers referred to therein.

(True Extract.)

(Signed) T. PYCROFT,
*Chief Secretary.*

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No. 238. ORDER THEREON, 19th November 1861, No. 2,136.

Communicated to the Chief Engineer for his information, in continuation of Government Order, dated 13th November 1861, No. 2,110.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 239. Read the following Proceedings of the Madras Government in the Military Department, dated 14th November 1861 :—

Read the following letter from Major General R. J. H. BIRCH, Secretary to the Government of India (Military), to the Secretary to the Government of Fort Saint George, Military, dated Fort William, 26th October 1861, No. 1,155.

SIR,

With reference to an application for the appointment of Lieutenant D. H. Trail, of the Madras Engineers, to the Survey Department of this Presidency, I am directed to request that you will move His Excellency the Governor in Council to cause that Officer's services to be placed at the disposal of the Government of India accordingly, if available.

Referred to the Department Public Works.

(Signed) H. MARSHALL, Colonel,
*Secretary to Government.*

No. 240. ORDER THEREON, 19th November 1861, No. 2,137.

Forwarded to the Chief Engineer for report, whether Lieutenant Trail can be spared from the Department of Public Works.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 241. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 29th October 1861, No. 6,554 :—

SIR,

No. 51, dated 9th September 1861, from Lieutenant Smalley. No. 168, dated 2nd October 1861, from the District Engineer Malabar.

1. I have the honor to submit for the orders of Government, the correspondence marginally noted, enclosing a receipt for Rupees 20, for medical attendance on Lieutenant Smalley, 2nd Assistant District Engineer, during the month of June 1861.

1 Letter from the District Engineer Malabar, with two enclosures, viz., 1 Letter from Lieutenant Smalley, 1 Receipt.

2. Dr. Cream, it would appear, is a private Medical practitioner at Manantoddy, and there being no Government Medical Officer at that place, or nearer than Calicut or Cannanore, distant respectively 58 and 53 miles, Lieutenant Smalley was compelled to avail himself of Dr. Cream's services, or leave his Range for a time to proceed to one or other of the above stations, which would have been attended with inconvenience to the public service.

3. I trust, therefore, Government will be pleased, under these circumstances, to authorize the District Engineer of Malabar, to reimburse the amount, viz., Rupees 20, to Lieutenant Smalley, from the item of Rupees 2,000 for "contingencies," entered in the Budget for the current official year, and to pay any similar small sums for a like purpose that may be incurred in future.

No. 242. ORDER THEREON, 19th November 1861, No. 2,138.

Forwarded for the report of the Civil Paymaster, as to whether any charges of this nature have hitherto been admitted.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 243. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 15th November 1861, No. 7,221:—

SIR,

With reference to the Order of Government, No. 2,111, dated 13th November 1861, I have the honor to report that the Security Bond executed by Messrs. Bainbridge, Byard, Gair & Co., on Colonel Henderson's account, is in my possession, and will be returned to that Firm on my receiving orders from Government to that effect, that Officer having furnished fresh security direct to the Accountant General from Messrs. Arbuthnot & Co., for the adjustment of the public demands standing against him.

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No. 244. ORDER THEREON, 19th November 1861, No. 2,139.

The Chief Engineer will communicate with the Accountant General, and if the second Bond is sufficient will at once return the first.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 245. Read the following letter from W. J. RAYNOR, Esq., Officiating Civil Paymaster, to J. D. SIM, Esq., Secretary to Government, dated Fort Saint George, 4th November 1861, No. 281:—

SIR,

With reference to the Order of Government, dated 9th October 1861, No. 1,871, I have the honor to report that the Naval Examiner, Bombay, in answer to my enquiry, states that, "the "practice of the Indian Navy has been and is to grant not only extra pay, but also extra addi- "tional steam allowance" to Mechanical Engineers required to work beyond ordinary Factory hours, "proportioned to an Engineer's daily receipts, *i. e.*, extra work for two hours entitles the "Engineer to the proportion of 2/7 of his daily pay and additional steam allowance." Under these circumstances Mr. Clements' claim can be admitted.

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No. 246. ORDER THEREON, 19th November 1861, No. 2,140.

Communicated to the Chief Engineer, with reference to his letter of the 17th August 1861, No. 3,648.

(Signed) J. D. SIM,
*Secretary to Government.*

No 247. Read the following Endorsement of the Chief Engineer, dated Chepauk, 1st November 1861, No. 6,741 :—

Read the following letter from Major J. F. STODDARD, Acting District Engineer Godavery, to Lieutenant-Colonel F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Dowlaishwaram, 18th October 1861, No. 839.

SIR,

1. I have the honor to submit the report on the effects of the recent floods in this District as called for in the Order of Government, No. 1,655 of the 31st August, and communicated in the Chief Engneer's Proceedings No. 4,546, under date the 2nd September last. This report would have been forwarded earlier, but a *second* very high fresh came down on the 2nd of September, and besides doing fresh injury to some works, did further damage to such as had been already to some extent repaired. This rendered it necessary to call for supplemental estimates, but as the time of two or three of the Executive Officers has been hitherto entirely taken up in repairing breaches and restoring the Canals, to save the rice crop (a matter of the very first importance), the supplemental estimates did not all reach me till yesterday.

2. From my previous letters you will have learnt that the western Delta and the river-embankments from Vizaishwaram to Polavarum, and on both sides of the central Delta suffered most from the first flood in July. In my letter, No. 295, dated 15th August last, I also reported that very heavy rain-storms had set in and threatened to do further damage. In the western Delta, with one exception (the destruction of the ring-bank in front of the Chettipett Calingulah) no further damage of any magnitude was done to the works; but I believe the crops in the low-lying parts of the Delta suffered more from this local cause than from the previous flood in the Godavery. The sea from some cause or other, was so swollen along the coast that the water in the drainages actually flowed back on the land. The Oopootairoo flowed into the Colair, and the Gostanuddy water stood on a level with that of the Kakerrapurroo Canal. These heavy rains also interfered most materially with the repairs, which was very unfortunate indeed, as relief from them had barely been obtained when the second high fresh, already alluded to and which rose to within 6½ inches of the July extraordinary flood, came down, and for the *third* time in the space of less than six weeks were the whole of the western Delta and a great part of the Rally and Amlápúr Táluqs swept by a deluge. The eastern Delta which had escaped injury from the first flood suffered from the second though not to any very great extent. The partial destruction of the Kadiapoolunka Lock and of the river-embankment near Veeravellipollem, as already reported to you in my letter of the 12th ultimo, No. 686, being nearly all the damage done there. No fresh injury was done in the western or central Deltas by the second fresh with two exceptions, both of which were in the Nagaram Táluq, but both of a trivial nature. One being the partial destruction of a drainage sluice at Rawarajoopollem and the other a breach in the river-embankment near Paserlapúdy.

These were therefore not specially reported at the time; nor did I consider it necessary to make a special report of a few breaches made during the very heavy rains of August last in the Samulcottah and Cocanada Junction Canal, and in the Cocanada Canal near Chintapilly. The latter might have been serious had not Lieutenant Magnay telegraphed for stone to Dowlaishwaram, and repaired the damage in time.

3. When I wrote my letter of the 1st August, I was not aware that a small masonry culvert, constructed last year under the Allavarum Channel, had been destroyed by the first flood. The destruction of this work cannot, however, be attributed to faulty design or construction, but merely to a want of sufficient water-way to carry off the enormous body of water pouring over the Delta through the breaches in the river bank, and for which of course provision never had been made. It was also so recently constructed that the masonry was still fresh, otherwise it might have escaped. Being very necessary, it should be re-constructed at once.

4. The only other masonry works injured were three of the sluices in the river-embankment below Poláverum. The wing walls of two are cracked, but can be repaired at a small cost. The third was quite destroyed by the flood of July, and will have to be re-built. These sluices are all of an inexpensive description and the cost of repairing the three will not be more than 700 Rupees.

5. I will not lengthen this letter by enumerating all the damages done by the several inundations; as they are given in detail in the report accompanying this.

I may conclude however by stating, that nearly all the important works have been repaired. They are all earthworks chiefly. The main Canals in the western Delta are all navigable again, and as far as the irrigation is concerned, I have no doubt that after such severe and repeated floods, some portion of the rice crop in the lowest lands will be lost entirely; but Mr. Harris who has been all over his Range very recently assures me that by far the greater portion are not only saved, but looking very well.

6. It will be observed from the accompanying report and estimate that the probable cost of repairing all the extra damages done by the same floods this year amounts to Rupees 68,654. In my letter, No. 295, dated 15th August last, I applied for a further special sum of Rupees 50,000 to meet these emergent repairs. The remaining 18,654 Rupees, I propose to obtain with the permission of Government as follows :—

Rupees 15,000 from the amount of Rupees 21,860, ordered to be expended on the works of Irrigation and Navigation in the central Delta on the 26th June 1861, No. 1,184. The widening of the Rally main Canal must therefore be postponed to next year; 2,154 Rupees, sanctioned in the current year's Budget, item No. 97, for Calingulah across the Iawaravoo Channel, and Rupees 1,500 sanctioned in the same Budget, item No. 134, for an outlet for drainage water, both which works may be deferred to a future time.

7. In reply to paragraph 3 of the Chief Engineer's Proceedings, I beg to state that from the 21st August 1861, till the 29th September last, I received Telegrams almost daily from Chinnoor informing me of the state of the river.

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1. Submitted to Government with reference to Proceedings of 31st August 1861, No. 1,655.

Enclosures.
1 Abstract and Estimate and Report.

2. It will be observed that a second high fresh, which rose to within 6½ inches of the extraordinary flood in July, took place on the 2nd September, and occasioned fresh injury to some works, and damaged again those which had, meanwhile, been partially repaired.

3. In the first flood, the western Delta and the river embankments upwards, from the Anicut to the Hills, and those on either side of the central Delta were the portions which suffered most. Besides the river floods, there were intermediately extraordinary heavy rains which damaged the crops in the low-lying lands. The District Engineer seems to think that the level of the sea had been temporarily raised, as the water in the drainages, which are only a few feet above the level of high tide, was thrown back upon the land; but this was more probably owing to the extraordinary body of water which had to be carried off, being more than the drainages could effect in a given time. The Rally and Amlápúr Táluqs in the central Delta appear to have suffered most. The eastern Delta escaped with one large breach only, but the banks of the Junction Canal between Samulcotta and Cocanada suffered from the heavy rains in August and the floods of the small river Yailaroo.

4. The only masonry works injured by the floods of the Godavery were the 1st lock at Kuddipi Lunka on the Coringa Canal; a culvert under the Allavarum Channel, a branch from the Amlápúr Canal in the central Delta; and three sluices in the river embankment.

5. A Statement accompanies the District Engineer's letter exhibiting the particulars of the earth works more or less injured, and the cost of their repair, amounting to Rupees 68,054.

6. The District Engineer concludes with stating that nearly all the important works have been repaired, and that all the Canals on the western Delta are navigable again. Further, that as far as the crops are concerned, doubtless some portion has been injured; but that Mr. Harris the Overseer in charge of the Range has been over the whole of it, and assures him that by far the greater portion has been saved and is flourishing.

7. To meet the excess of Rupees 18,054 over the Rupees 50,000, which he stated would be probably required, the District Engineer proposes to postpone the following works and divert the amount allotted to them to the more necessary repairs:—

| | RS. |
|---|---|
| From the allotment for works of irrigation and navigation in central Delta, 26th June 1860, No. 1,184... | 15,000 |
| Calingulah over Iamaravoo Channel, Item No. 97 | 2,154 |
| Outlet for drainage water, Item No. 134 | 1,500 |
| Total...... | 18,654 |

8. The exertion of Overseers Harris and Stephenson, during the occurrence of the flood have already been acknowledged by Government, and the Chief Engineer trusts that the exertions of the District Engineer and his Assistants of all grades in repairing the principal works and re-opening Channels which had been extensively injured, all within the space of two months, will also meet with favorable notice.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 248. ORDER THEREON, 19th November 1861, No. 2,141.

The Government notice with approbation the energy and zeal displayed by the Acting District Engineer Godavery, and his Assistants of all grades, in repairing the principal works and re-opening the channels injured by the recent heavy floods and rains in that District; and they trust that the repairs will be prosecuted with expedition, and thoroughly and efficiently completed at an early date. The entire cost, it is observed, is estimated at Rupees 68,054; of which a sum of Rupees 18,054 is proposed to be provided by deferring the works mentioned in paragraph 7 of the Chief Engineer's endorsement. To this arrangement the Government have no objection. The other 50,000 Rupees may be taken from the reserve fund.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 249. Read the following Proceedings of the Madras Government in the Military Department, dated 15th November 1861, No. 4,148:—

Communicating a letter from the Adjutant General of the Army, stating that the Provincial Commander-in-Chief has no objection to the Chief Engineer disposing of applications for leave in India in the case of Warrant Officers in the Public Works Department, but that it is desirable that a Register of the same should be kept by him. (Vide Military Proceedings, 15th November 1861, Nos. 391 @ 393.)

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No. 250. ORDER THEREON, 19th November 1861, No. 2,142.

Communicated to the Chief Engineer for information and guidance, with reference to his letter dated 24th October 1861, No. 6,334.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

No. 251. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 7th November 1861, No. 6,928 :—

SIR,

1 Letter from District Engineer Upper Godavery, No. 122, dated 23rd October 1861.

1. In the accompanying letter the District Engineer Upper Godavery reports the progress made with temporary communications at the three Barriers during the month of September.

2. Owing to the illness of the Overseer employed on the survey of the first Barrier it has progressed but little, and the District Engineer hesitated to press it on, as it could only have been done at the risk of severe illness to all engaged thereon.

3. Sickness overtook the parties at the other Barriers likewise, but the survey at the second has been completed, and that of the third was to have been finished by the 19th ultimo.

4. The actual construction of the tram-ways under these circumstances could not be commenced, but the collection and sawing up of timber has been proceeded with.

5. The number of Coolies that have applied for work, the District Engineer states, leaves no room for doubt that there will be abundance of labor for the two upper Barriers, upwards of 400 men having been employed at the second Barrier under Mr. McGregor, when, owing to an outbreak of fever, he was obliged to disband them for the time.

6. Captain Haig remarks by the way that the last two years' experience shows that the unhealthy season of the year is mostly confined to the two months following the cessation of the rains, and that it does not extend to the cold weather as was formerly supposed. There has been a good deal of fever but of a mild type, and not a single death has occurred out of some hundreds admitted to the Hospital during the past few months.

7. The suddenness of the fever combined with other causes however, led to a panic amongst the Coolies, who at first deserted in large bodies, but many have since returned, and Captain Haig expects shortly to have the whole of them back again, besides large bodies from the neighbouring Districts of Vizagapatam and Ganjam. It has also been reported to me that tank diggers from the neighbourhood of Madras are offering to proceed to the Godavery.

8. Captain Haig represents that he expects to be able to lay out 5 lacs altogether during the current year, and asks for sanction to proceed with the permanent works.

9. The Proceeding of Government of the 31st October 1861, No. 2,017, conveying that sanction have already been forwarded to Captain Haig, from which he will observe that the Government have applied for an additional 2 lacs of Rupees ; the remaining lac asked for by Captain Haig might be applied for hereafter.

10. The work he proposes to undertake is as much of the earthwork of the Canal round the first Barrier as the available labor will admit of, and half of the masonry of the Anicut and entrance Lock, with a view to their completion next season.

11. In the supervision of this work, Captain Haig asks for the services of an experienced Officer and two Overseers or Supervisors in addition to those applied for, for the tram-road, and lately sanctioned in Proceedings of Government, No. 2,013, dated 30th October 1861. He also requests permission to entertain an Office Manager on Rupees 120 per month for the management of his accounts. This I consider highly necessary, for it will be impossible for Captain Haig, whose time will be so much taken up with the executive duties, to attend to details of accounts ; and he should therefore be provided with efficient assistance in his Office. If the Government approve of his request I will endeavour to provide a duly qualified officer.

12. Captain Haig concludes with a request that early orders may be sent for the additional funds being placed at his disposal, as he has already drawn on the Collector for 1,50,000 out of the 2 lacs entered in the current year's Budget, and estimates his monthly expenditure in future at Rupees 35,000.

From Captain F. T. HAIG, District Engineer Upper Godavery, to the Deputy Chief Engineer, Northern Circle, dated Dúmagudiam, 23rd October 1861, No. 122 :—

SIR,

1. But little progress has been made with the temporary communication works at the three Barriers during the past month. At the first Barrier, the survey has progressed but little in consequence of the illness of one of the Overseers employed upon it, and the transfer of the other to superintend Overseer Kelly's work at this place during the latter's temporary absence on sick leave. The number of coolies also having greatly increased, I was compelled, in order to find employment for them, to detach the Overseer Venkataruthnum, when convalescent, from the tram-way survey to mark out work on the Canal on which from 700 to 1,000 men have been engaged for three weeks past. From these causes the survey has been almost at a stand still this month, and indeed I had no wish to push it forward as that could only have been done at the risk of severe illness to the party engaged on it, which has already suffered a good deal.

2. The month has been an unhealthy one. The rains almost ceased from about the middle of September, and the bright hot weather since then has been accompanied with an outburst of fever all along the river, which has greatly crippled our operations. At the second and third Barriers, both Lieutenant Roberts and Assistant Overseer McGregor have had repeated attacks, and nearly the whole of their working parties have suffered similarly. At the second Barrier so large a proportion were taken ill that I sent orders to Mr. McGregor a few days ago to break up his establishment (which is but small) for the present, and to remove from his head quarters in the heart of the forest to the river bank, where there is more clearing and less likelihood of fever. I have however just heard from from him that the fever is on the decrease and his men are in better spirits. At the third Barrier Lieutenant Roberts has carried forward his survey with most praiseworthy perseverance in spite of the almost constant illness of his whole party. He expected to complete the survey of his main line by the 19th instant, Mr. McGregor has finished his and is now engaged in plotting it.

3. Of course under these circumstances I had no wish to commence the construction of any part of the tram-roads. Mr. McGregor has however been engaged in collecting and sawing up timber, and I have sent an agent for the purpose of making contracts for the same material at the third Barrier.

4. The number of coolies that have applied for work to Mr. McGregor leaves no doubt that there will be no deficiency of labor at the two upper Barriers, and that all that the works there will require will be furnished by the neighbouring country without at all affecting the supply here. Mr. McGregor had at one time 400 men, but was compelled by the outbreak of fever to disband the most of them for a time. They will return when sent for.

5. I may here remark that the experience of this and the past year shows very plainly, that the feverish season is mostly confined to the first two months after the cessation of the rains, and that the cold weather which was formerly supposed to be the most unhealthy time, is by no means so. At this place we have had as many as 140 cases of fever in Hospital at one time in the past three weeks, but this is far above the average, the number having been swelled by the sudden accession of 50 from an out-station where, through the neglect or ignorance of the native in charge (no European being available at the time), they had been allowed to accumulate for a fortnight, and two men had actually died.

6. The per centage of fever cases has been 8 to 10 for the past three weeks. The only cases of death were the two just mentioned, and two more at this place, who had evaded going to Hospital and were only brought there when in a dying state. Doctor Houston considers the fever to be of a comparatively mild character, and finds it invariably yield to treatment in the course of a few days. Not a single case of death has occurred out of some hundreds admitted during the past few months.

7. The sudden and very marked accession of the disease, as abovementioned, during the month, led, I think, to a panic among our work people, 500 of whom deserted about a fortnight ago. This is a source of much inconvenience, embarrassment, and expense, to which for the first year or two we shall be liable. The people from the coast Districts, whence most of our labor is derived, come with many fears and misgivings, to a country proverbially unhealthy, separated from their homes by a broad belt of reputedly deadly jungle, and associated in their minds with all the vague terrors that beset the distant and unknown. It is not to be wondered at therefore that large bodies of laborers collected under such circumstances should be liable to occasional panics.

8. There were however other reasons for this sudden desertion of so many of our men. The unfortunate stoppage of the works, which has led to so much inconvenience and expense, prevented our making preparations in sufficient time for the reception of the 1,200 men who quickly gathered after fresh invitations had been issued. Neither shelter nor food could be provided in time. For a fortnight, we were in continual danger of famine, and I have no doubt that the discomforts they endured in consequence induced many to return to their villages. Most however will, I believe, come back again.

9. I would now earnestly solicit permission to proceed with the permanent works at this Barrier, and that two lacs in addition to the three which the temporary communication works are estimated to cost, may be granted for that purpose. Labor, I am sure, will not be wanting sufficient for both projects. I have in fact at this moment, and have had for some weeks past several hundred men for whom I have as yet no employment on the tram-roads, and whom rather than dismiss I have set to work upon the Canal excavation. There are at present about 800 coolies here besides, above 300 carpenters, smiths, and skilled artificers in the Workshop. A fortnight ago we had 1,200, though from the cause abovementioned the number has been temporarily reduced.

10. From the Vizagapatam and Ganjam Districts, I hear from Lieutenant Montgomerie that large numbers are only waiting for an advance of money to come. Above a thousand had been registered by my Gumáshta there some weeks ago. Money has since been sent. From Madras I hear of 2,600 tank diggers offering for the Canal work, and I hope to secure them. From the inland Districts I also expect a good many.

11. As one leading point to be kept in view in laying out the lines of tram-way will be the avoidance of any heavy cuttings and embankments, it is evident that but a small part of the labor which we have now every prospect of receiving will be required for those works, and that a large surplus will be available for the more important operations at this Barrier.

12. The Government will, I think, consider these sufficient grounds for ordering the resumption of these operations, which we are now in a position to carry forward effectively, having the whole working season before us, and many necessary preparations completed.

13. The work which I would propose to undertake would be as much of the earthwork of the Canal as the available labor will permit, with probably a part of the masonry, and about one-half the masonry of the Anicut and entrance Lock, with a view to a completion of both next season. Some additional expense must be incurred for the transport of the lime stone required, the favorable time for its carriage by water from the quarry, fifteen miles distant, having been lost. We must now carry it five or six miles by land, but the increased expense which this will involve will be unimportant. About 1,000 tons of stone are ready for carriage and 2,000 tons of firewood for burning it.

14. I should require for this work one Officer of some experience, and two Overseers or Supervisors, in addition to those asked for, for the tram-roads in my letter of 21st September, No. 77.

15. I would also request sanction for an Office Manager on a salary of about 120 Rupees per month. This addition to my account establishment is indeed absolutely essential. My present establishment is unequal to the work required of it, which from the nature of the works

in progress, the amount of the expenditure, the inexperience of the whole of my Assistants, and the great distances which separate their different stations from my own head quarters, requires an able and experienced Accountant to prevent the accounts falling into confusion.

16. In conclusion, I would request early orders on this letter, especially regarding the supply of funds, the Budget allotment for the year being only 2 lacs out of the 5 which it is now proposed to spend. I have already drawn on the Collector to the extent of Rupees 1,50,000 and cannot estimate my expenditure in the next two months at less than 35,000 Rupees each.

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No. 252. ORDER THEREON, 19th November 1861, No. 2,143.

1. Resolved that application be made to the Supreme Government for a further allotment of 3 lacs for expenditure in the current official year on the Upper Godavery works. The Chief Engineer is authorized, pending this grant, to advance such funds as Captain Haig may require, to be repaid out of the grant hereafter.

2. For the supervision of the work on the Anicut and Canal at the first Barrier the Government sanction the appointment of an Officer and two Overseers or Supervisors. The Chief Engineer will recommend an Officer accordingly.

3. The Government also sanction an Office Manager on Rupees 120 monthly.

4. The Government approve of the plan of operations sketched by Captain Haig, so far as regards the Anicut which can be proceeded with at once. As to the Canal and Locks, Captain Haig can clear the ground for the excavation, collect materials, and make all other preparations; but until further instructions he will abstain from work which commits Government to Locks of the large dimensions proposed by him. The Anicut and other works, within this limit, will afford ample employment until the final decision of Government is conveyed to him.

(Signed) J. D. SIM,
*Secretary to Government.*

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Ordered that the following letter be despatched.

No. 253. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Public Works Department, dated 19th November 1861, No. 2,144.

SIR,

5th July 1861, No. 2,407.
6th Aug. ,, ,, 2,820.

1. With reference to your communications noted in the margin, I am directed to forward copy of a Despatch to the Secretary of State on the subject of the operations on the Upper Godavery, and of a report since received from the Chief Engineer, detailing the progress made during the month of September last, and applying for further funds.

2. The "temporary" works, you will perceive, are estimated to cost nearly three lacs of Rupees for railways, rolling stock, boats, ponies, superintendence, &c. The improvement of the river bed is expected to require about 25,000 Rupees. Thus for about $3\frac{1}{4}$ lacs, the river will be opened for traffic by the next freshes, and the Cotton crop of the present season be brought down by it to the Coast. These temporary works were not designed to supersede the permanent works, their object was to open the river as speedily as possible, to attract trade into this new channel, and to afford data for the more perfect operations, the completion of which will be very expensive and will occupy some years. Even when the permanent works are finished, these temporary works will be useful as subsidiaries in drawing traffic, supplies and labor. It must be borne in mind also that the permanent works must be completed throughout to be of real use, for the great market which has to be reached is beyond the Upper Barrier, the intermediate country being poor and sparely populated.

3. The prospects of labor have considerably improved during the last few months, and as Captain Haig expects a surplus of labor over and above what will be required for the temporary

works or can be profitably employed on them, he has been authorized, pending further orders, to proceed with the Anicut and such other work at the first Barrier as will not commit Government to the construction of the large Locks proposed by him. This will afford ample employment for the present for the labor at his command. He expects to be able to spend about five lacs this year, so that a further assignment of three lacs is necessary, which I am to request may be granted as soon as possible.

NOTE.—This is inclusive of the two lacs promised in July 1861.

4. With regard to the permanent works generally, I am directed to request attention to the Minutes of the Honorable the Governor, from which the Supreme Government will perceive that there are several points requiring serious consideration, before the works at all the Barriers can be confidently ordered for immediate prosecution.

5. The Government have sanctioned all the superintendence applied for by Captain Haig, and do not anticipate difficulty in meeting his requirements in this respect. Steamers have been placed on the navigable reaches of the river and cargo boats are being built. At the outset the Government must of necessity act as carriers of the traffic, and the requisite arrangements have been sanctioned; but the principle is unsound, and they will therefore leave this duty to private agency at the earliest practicable period.

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No. 254. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 11th November 1861, No. 7,067:—

SIR,

1. I have the honor to submit herewith a Memorandum of the proposed allotment of the sum of Rupees one and half lac offered by the Government of India, in their Orders noted in the margin, for opening out facilities for the export trade of the country, and more especially for the Cotton trade.

Proceedings of the Government of India, dated 9th October 1861, No 90, communicated in Proceedings of Madras Government, No. 2,003, dated 29th October 1861.

2. The two first works in the Memorandum are roads in the Vizagapatam District, one leading to Jeypur and the other to Raipur, a District in the Nagpore territory, the opening of which is recommended by the Collector of Vizagapatam in his report regarding the supply of Indian cotton to England as a means of bringing that article to the Coast for export. In the District Engineer's report on the above roads, forwarded with my Endorsement of the 26th October 1861, No. 10,005, he recommends the immediate expenditure of 9,000 Rupees, being at the rate of Rupees 150 per mile for the 60 miles of road to Jeypur beyond the Gálikonda Range (Harris' Valley), up to which a bullock tract already exists. To reach the Cotton country a further distance of 40 miles to Jugdulpoor in Bustar is recommended at the same rate of 150 Rupees per mile, making in all 15,000 Rupees, of which I have provided 9,000 Rupees for the present year. For the road from Purvattapur to Raigudda, leading to the Raipur District, which is not considered of equal importance, an outlay of 2,000 Rupees is allowed for this year.

| | | |
|---|---|---|
| Road from Vizagapatam to Jeypúr | Rupees | 9,000 |
| Do. from Purvattapuram to Raigudda | ,, | 2,000 |

Proceedings of Madras Government, 26th August 1861, No. 1,706.

3. In the Nellore District two roads, one the continuation of the Cumbum road from Ongole to Kottapatam on the Coast, and another from Nellore to Budwail are proposed. Both are essential to the Cotton trade, and are referred to particularly in a letter from the District Engineer, Nellore, dated the 19th April 1861, herewith forwarded, together with the report of the Collector referred to therein. The completion of the road from Cumbum, viâ

| | | |
|---|---|---|
| Ongole to Kottapatam | Rupees | 14,000 |
| Nellore to Budwail | ,, | 14,000 |

In Proceedings Board of Revenue, No. 1,984, dated 17th April 1861.

Ongole to the Coast, is strongly recommended by the Collector as a means of conveying the Cotton grown to the south of the Kistna in the Kurnool District to a Port of shipment. The portion of the road near the Coast passing over a salt swamp and through heavy sand between the swamp and the beach is noticed as requiring immediate attention, and for this latter work the late Acting District Engineer was called upon for an estimate which he submitted, with an intimation that the amount (Rupees 13,700) had been sanctioned by the Collector from the local funds of the District.

District Engineer's letter, dated 17th April 1861, No. 1,984.

The road from Nellore to Budwail, viâ the Dorenál Pass, by which Cotton grown in Cuddapah is brought to Madras through Nellore, is reported to be in bad order and to be much in want of masonry works to complete it. For this also the Collector is stated to have sanctioned an estimate of Rupees 19,000 from the local funds, but as the two roads referred to are of general importance and should therefore be undertaken from imperial funds, I have thought it proper to provide for them in the present allotment, and thereby relieve the local funds of this large expenditure. These roads were hastily formed in the years 1853 and 1854, at a large cost during a famine, in order to provide employment for the poor of the country, and the masonry works required for their completion were not then built.

| | RS. |
|---|---|
| Cuddapah to Chittoor.. .. .. .. .. .. .. .. | 15,000 |
| Do. to Bellary frontier .. .. .. .. .... | 9,000 |
| Do. to Budwail.. .. .. .. .. .. .. .. .. | 5,400 |

4. In the Cuddapah District, where much Cotton is grown, three roads are provided for. The two first are stated by the District Engineer, in his report dated the 18th April 1861, to be the most important. Of the first mentioned road the portion from Cuddapah to the frontier of the North Arcot District, though stated to be in good order, is incomplete for want of masonry works, and for these a provision made in the Budget for 1861-62, is under restriction (marked A) and therefore not available unless exempted by the grant now proposed. Of the second road the portion to the Bellary frontier running through black Cotton soil is stated to be frequently impassable, and for it Rupees 9,000 are entered in the accompanying Memorandum. Towards the completion of the Cuddapah and Budwail road to the Dorenál Pass, to connect with that to Nellore referred to in the preceding paragraph, Rupees 4,000 are provided.

Item No. 200, eight Bridges between Kulcudda and Gooleheroo, Rupees 15,000.

5. Of the remaining roads referred to in the District Engineer's letter, two, as per margin,* have been removed from restriction by a grant from the Reserve Fund and are now in progress, and for the Cuddapah and Madras Road, the early completion of which is advocated, because the North West Railway will probably be opened for traffic by the end of the year as far as Kircumbaddi, 10,867 Rupees are allowed in the Budget. The District Engineer, however, reports that this sum has been spent, and he proposes to provide additional funds by a re-arrangement of his allotment, his letter containing which was submitted to Government with my Endorsement No. 7,043, dated 11th November 1861, consequently, no provision is necessary from the one and a half lac fund.

* Royachoti by Madnapilli to Poonganoor, Item No. 147, Budget of 1861-62.
Cuddapah by Razepett to Kurnool, Item No. 292, Budget of 1861-62.

District Engineer's letter, dated 10th May 1861, No. 19.

| | RS. |
|---|---|
| Bellary to Ghooty .. ... .. .. ... .. .. .. .. | 9,000 |
| Ghooty to Cuddapah .. .. .. .. .. .. .. .. | 9,000 |

6. In the report on the Bellary District, the road from Bellary to Ghooty is stated to be often impassable for carts and to improve it, and the continuation to the Cuddapah frontier by which Cotton is conveyed to the coast, I have provided a sum of Rupees 18,000. The District Engineer roughly estimates the total expenditure for the whole distance of 75 miles at Rupees 1,50,000.

Extension of Sadras Canal to the Pálár, Rupees 17,000.

7. The completion of the East Coast Canal to the Pálár River is another work of importance, which I once more recommend to the special attention of Government. In their Proceedings of the 21st July 1859, No. 1,751, Government have recognized the importance of this

Canal and admitted the traffic on it to be great, as noticed in paragraph 3 of Colonel Birdwood's letter, dated 31st May 1861, No. 1,055, recommending a grant for this work from the Reserve Fund.

Proceedings of Government, No. 1,273, dated 10th July 1861.

Sumpagee Ghát, Rupees 7,000.

Proceedings of Government, 23rd September 1861, No. 1,773.

8. The completion of the repairs of the Sumpagee Ghát leading to Mangalore, which was sanctioned by Government, but for which no special grant was given from the Reserve Fund, is another work which it is desirable should be proceeded with and finished this year. The District Engineer, South Canara, is unable to provide for this work from the General Funds at his disposal, and I have, therefore, taken advantage of the offer of additional funds to supply this need, as the Ghát in question is an important outlet for the trade of Mysore and Coorg.

| | RS. |
|---|---|
| Trichinopoly to Caroor .. .. | 7,500 |
| Do. to Salem.. .. | 5,000 |
| Do. to Arealore.. .. | 7,500 |

9. The three roads from Trichinopoly to Caroor, Salem, and Arealore, entered in the List now sent are also such as come within the above category. The two first are in the Budget for 1861-62, items Nos. 163 and 166, but the latter is under restriction (marked A). For the roads to Salem and Arealore, Rupees 5,000 each were recommended from the Reserve Fund in the District Engineer's letter of the 27th July 1861, No. 493, submitted with Endorsement, dated 8th August 1861, No. 3,728. This recommendation will of course fall to the ground should the proposal to allot funds for these roads from the special one and a half lacs be approved.

| | RS. |
|---|---|
| Moondagoode towards Bunkapore.. .. .. .. ... | 5,000 |
| Do. towards Palla.... .. .. .. .. .. | 2,000 |

10. The District Engineer, North Canara, in his report dated 20th May 1861, No. 253, proposes to lay out Rupees 7,000 for the following two roads which he states can be made useful for traffic by the end of the year:—

| | | | | RS. |
|---|---|---|---|---|
| Palla and Bunkapore line within North | Canara | limits... | | 2,000 |
| Moondagoode and | do. | do. | do. ... | 5,000 |
| | | | Rupees... | 7,000 |

Captain Walker enters fully into the state of the roads in his District, which it is unnecessary here to recapitulate, but I recommend the laying out of the above sum during the current year on the above lines, as they are portions of feeders to the principal road leading to the port of Coompta, whence Cotton grown in the south Mahratta country is exported.

| | RS. |
|---|---|
| Madura to Kareapaty............ | 6,000 |
| Kareapaty to Orepucotta..... | 6,600 |

11. In the Madura District, the two roads noted in the margin, which are, in fact, a continuation of the same line, are proposed to be undertaken to complete the link in the Cotton road between Madura and Tuticorin, the remaining portion, with the exception of the last three miles into Tuticorin now under execution, having been made several years ago.

12. I beg, in conclusion, to state that I have no doubt the allotments now proposed by me will be fully availed of in the several Districts, as the importance of the works for which they are recommended is recognized by District Engineers in their reports thereon.

13. The District Engineers' reports returned in the Official Memorandum, dated the 9th instant, are now re-transmitted.

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No. 255. ORDER THEREON, 19th November 1861, No. 2,145.

1. The Governor in Council approves of the works proposed by the Chief Engineer with the exception only of the second. The small sum (Rupees 2,000) proposed for this road can be taken from the ordinary Budget funds, and the grant for the Bellary roads raised to Rupees 20,000.

2. Colonel Horsley will take care that the funds offered by the Supreme Government are not left unexpended at the close of the year. He should at once communicate his proposals as

now sanctioned to the District Engineer, in order that they may be prepared to commence operations as soon as the sanction of the Supreme Government is received.

3. The two small works in North Canara may be proceeded with immediately.

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Ordered that the following Telegram and letter be despatched to the Supreme Government :—

TELEGRAM.

"Reply to your Circular No. 90 of 9th October, despatched to-day. Please communicate "decision thereon by Telegraph, and reply to letter dated 11th October No. 1,967."

(Signed) J. D. SIM,
*Secretary to Government.*

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Ordered that the following letter be despatched-

No. 256. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Secretary to the Government of India, Public Works Department, dated 19th November 1861, No. 2,146.

SIR,

1. In reply to your Circular No. 90, dated 9th October last, I am directed by the Governor in Council to enclose a list of the works on which His Excellency proposes to expend the additional assignment of Rupees 1,50,000 promised to this Presidency.

2. With one exception, these works have been selected with especial reference to the export Cotton trade of the Presidency. The exceptional work is the continuation of the Southern Canal (already open from Madras to Sadras) to the Pálár river. This comes within the scope of paragraph 3 of your Circular, "as having an important bearing on the public welfare." The Canal (on which tolls are now levied) ends at present at an insignificant village, and the traffic of the country to the south cannot be brought on it without first being conveyed across the Pálár river, and then several miles by land; when this has been accomplished, it ceases to be worth the while of the owners to take advantage of the Canal for the remaining distance. The work now proposed will obviate this, and with the large demand of the Presidency Town, at one terminus of the line, a great development of the trade of this part of the country may be expected.

3. You will perceive that no allotment is proposed for the two great Cotton Districts, Tinnevelly and Coimbatore. This is in consequence of sufficient provision having already been made for them from the ordinary funds of the Presidency.

4. This Government, I am to add, can expend the proposed assignment of Rupees 1,50,000 with advantage within the current official year. But to do this, it is essential that the sanction of the Supreme Government for the commencement of the works should be immediately communicated.

5. The small works, marked A, in North Canara, have been ordered for execution in anticipation of sanction of the Governor General in Council.

6. The Governor in Council concludes that this assignment is altogether independent of the proceeds of the 1 per cent. Income Tax, which amounts for Madras to about Rupees 3,60,000, and formed the subject of my letter, dated 11th October 1861, No. 1,967, Revenue Department. An early reply to that communication is particularly requested.

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REMARKS.

1. *Road from Vizagapatam to Jeypoor, Rupees* 9,000.

This is a line of great importance commercially and politically. The Cotton of the Nagpore country about Bustar will reach the port of Vizagapatam by it, and it is desirable to open up the wild tract of Jeypoor, which has hitherto been in a state of great lawlessness

from its inaccessibility. A survey for a cart road is being carried on, but a good bullock trace already exists from Vizagapatam to the Galikondah range of hills. The proposed grant of Rupees 9,000 is for the extension of this to Jeypoor, a distance of 60 miles. The Commissioner of Nagpore has been addressed regarding the simultaneous continuation of the road into Bustar.

2. *Ongole to Kottapatam in the Nellore District, Rupees* 14,000. — A good road has been made already from Ongole, west-wards to Cumbum, in the Kurnool District. This grant is for its extension to the Port and Salt Depôts of Kottapatam. If this link be completed, the Cotton and other produce of the northern parts of Kurnool and Nellore can be shipped from Kottapatam and return loads of Salt be there obtained.

3. *Nellore to Budwail in Cuddapah by the Dorenala Pass, Rupees* 14,000. — This line leads direct from Nellore into the heart of the Cuddapah District. From Nellore there are good roads to Kistnapatam and Eskapilli, whence produce can be exported by sea and return loads of Salt obtained. Kistnapatam will also be ultimately connected with Madras by the East Coast Canal.

4. *Cuddapah to Budwail, Rupees* 5,400. — This completes the above line, and the communication between Nellore, its Ports and Salt Depôts on the one hand, and the capital of the Cuddapah District on the other.

5. *Cuddapah to Chittoor in the North Arcot District, Rupees* 15,000. — This is a very important line, by which the Cotton and Indigo of Cuddapah and Bellary find their way to Madras.

6. *Cuddapah to the Bellary Frontier, Rupees* 9,000. — This is the main line by which the Cotton of Bellary reaches Madras.

7. *Bellary to Cuddapah Frontier, Rupees* 20,000. — This is the continuation of the above line to Bellary. A glance at the map will show its importance.

8. *Extension of S. Canal from Sadras to the Palar river, Rupees* 17,000. — *Vide* paragraph 2 of letter.

9. *Moondagode towards Bunkapoor in North Canara, Rupees* 5,000. — This will connect parts of the Darwar Cotton country with the Port of Coompta, the communications with which are excellent. This line has been sanctioned by this Government.

10 *A. Moondagode towards Palla, Rupees* 2,000. — Do. do. do.

11*A. Sumpajee Ghát in South Canara, Rupees* 7,000. — This grant will complete the repair of this important Ghát leading from Mysore and Coorg to the large port of Mangalore.

12. *Trichinopoly to Caroor, Rupees* 7,500. — This line will connect the western part of the Trichinopoly District with its capital, from whence by land and rail its Cotton and other produce may be conveyed to Negapatam for export.

13. *Trichinopoly to Salem, Rupees* 5,000. — This road connects Trichinopoly with Salem, whence the railway affords easy communication with Madras.

14. *Trichinopoly to Arrealore, Rupees* 7,500. — This line connects the north-east part of the District with Trichinopoly and the Madras Trunk road.

15. *Madura to Rariaputty, Rupees* 6,000.
16. *Madura to Areapucottah, Rupees* 6,600. — These roads (15 and 16) connect the Cotton tracts of Madura with the Port of Tuticorin, whence Cotton is largely exported already.

N. B.—For the Cotton Districts of Tinnevelly and Coimbatore funds have already been allotted by this Government to the full extent required this year. The same has been done for the Kaiga Ghát and works at Beitkal in North Canara.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 257. Read the following Endorsement of the Chief Engineer, dated Chapauk, 31st October 1861, No. 6,706.

Read the following letter from Captain JOHN MULLINS, District Engineer Nellore, to Captain F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Nellore, 15th October 1861, No. 1,872 :—

SIR,

1. In submitting a bill amounting to Rupees 401-0-3 for certain repairs executed in 1860-61, to the office and Carpenter's shed at the Engineer Store-yard Nellore, in anticipation of sanction, I have the honor to inform you that the estimate on which the work was executed is dated 7th June 1860, and is reported to have been sent in with the accounts for that month to the late Acting District Engineer by Captain Ritherdon for sanction, but what became of the document is not now discoverable. Captain Greenaway's attention was first drawn to the expenditure on the receipt of the annual Progress Report at the close of the year, and Captain Ritherdon was then called upon for explanation, when he reported that the estimate had been duly submitted, and intimation given that the work, being emergent, would be commenced immediately.

2. The original estimate amounted to Rupees 350, but it was found necessary to substitute Ceylon palmyras for some of the old rafters, which had become unserviceable, and this caused an addition of Rupees 50 to the expenditure; of the outlay Rupees 72 belong to the buttresses added to the east face of the office, and the remainder to the repair of the Carpenter's shop.

3. As regards the work itself, I am of opinion that the circumstances were such as to warrant the commencement of the repairs in anticipation of sanction. The buildings were severely shaken by the storm of 1856, and the shop was then kept in its place by wooden struts placed against the brest-summers at each pillar. The cyclone of 1857 disturbed and injured the roof so much that hardly a rafter remained in its former position; and, in the very heavy rains of 1859, the roof was only saved from falling in by being supported in half a dozen places by posts with longitudinal pieces under the collar beams. Still, however, as the shop could not well be spared, the building continued to be used, but when the new shop to join this and the Smith's shop was sanctioned,* it was seen that the repairs could no longer be delayed. Nothing has been done but what was necessary, viz., the removal and replacing of the roof, the re-building of 4-11 feet pillars and 6-6 feet pillars, which had been blown considerably out of the upright, and the construction of five buttresses on the south side at the alternate pillars, and while regretting that the loss of the original estimate should have resulted in the unauthorized expenditure, I beg to inform you that on the 1st August I intimated to all Officers the responsibility that rests with them for taking care that when works are commenced in anticipation of sanction no delay in obtaining the requisite retrospective authority is allowed to remain unnoticed, as the loss of an estimate in transit or by oversight is an event which cannot be absolutely guarded against, though it has never before happened.

* By Government, 8th May 1860.

BILL No. 386 OF 1860-61.

*Nellore District.*

*Work.—Repairing Carpenter's shed at the Engineer's Store-yard at Nellore, amount of estimate Rupees 400. Commenced in anticipation of sanction.*

| Description of charges. | | | Amount. RS. | A. | P. | Total. RS. | A. | P. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| *Labor.* | | | | | | | | | |
| 33 | Bricklayers | at 6 Annas each... | 12 | 6 | 0 | | | | |
| 150 | Do. | at 5 do. ... | 46 | 14 | 0 | | | | |
| 53 | Men Coolies | at 2½ do. ... | 8 | 4 | 6 | | | | |
| 119 | Do. | at 2 do. ... | 14 | 14 | 0 | | | | |
| 292½ | Women Coolies | at 1¼ do. ... | 22 | 13 | 7 | | | | |
| 56½ | Boys | at 1 do. ... | 3 | 8 | 6 | | | | |
| 28½ | Carpenters | at 7 do. ... | 12 | 7 | 6 | | | | |
| 11½ | Do. | at 6 do. ... | 4 | 5 | 0 | | | | |
| 26½ | Do. | at 5 do. ... | 8 | 4 | 6 | | | | |
| 7 | Do. | at 4 do. ... | 1 | 12 | 0 | | | | |
| 117⅓ | Small Coolies... | ... ... ... ... | 13 | 13 | 11 | | | | |
| 45 | Carpenter Apprentices | ... ... ... ... | 14 | 15 | 3 | 164 | 6 | 9 | |
| *Materials.* | | | | | | | | | |
| 13,750 | Bricks | at 2 Rs. 8 As. per 1,000. | 34 | 6 | 0 | | | | |
| 12,000 | Pan-tiles | at 1 ,, do. ... | 12 | 0 | 0 | | | | |
| 4,500 | Flat-tiles | at 1 ,, do. ... | 4 | 8 | 0 | | | | |
| 12,000 | Bricks | at 2 ,, 4 As. do. ... | 27 | 0 | 0 | | | | |
| 8½ | Candies of chunam | at 9 ,, per candy... ... | 76 | 8 | 0 | | | | |
| 4 | Do. | at 5 ,, do. ... ... | 20 | 0 | 0 | | | | |
| 15 | Do. of sand | at 10 As.... ... | 9 | 6 | 0 | | | | |
| 10 | Do. | at 8 ,, ... ... | 5 | 0 | 0 | | | | |
| 8½ | Candies of chunam pounding | at 1 ,, 6 ,, ... ... | 11 | 11 | 0 | | | | |
| 15 | Vis of Rafter nails | at 5 ,, 9 P. each vis | 5 | 6 | 3 | | | | |
| 9½ | Vis of Reeper do. | at 7 do. ... | 4 | 2 | 6 | 209 | 15 | 9 | |
| *Cartage.* | | | | | | | | | |
| 13,750 | Bricks | at 8 ,, per 1,000 ... | 6 | 14 | 0 | | | | |
| 16,500 | Flat and Pan tiles | at 4 ,, do. ... | 4 | 2 | 0 | | | | |
| 1 | Cart for do. | at 1 ,, 6 P. ...... | 0 | 1 | 6 | | | | |
| 12,000½ | Bricks | at 12 ,, 6 ,, do. ... | 9 | 6 | 0 | 20 | 7 | 6 | |
| | Extra establishment | ... ... ... ... ... ... | 4 | 0 | 0 | | | | |
| | Repairing 120 nails at 1 Pie each | ... ... ... | 0 | 10 | 0 | | | | |
| | Contingencies | ... ... ... ... ... ... | 0 | 4 | 0 | | | | |
| | Sundries | ... ... ... ... ... ...... | 1 | 4 | 3 | 6 | 2 | 3 | |
| | | Total...... | | | | 401 | 0 | 3 | |

Commenced on the 7th August 1860.

Completed 26th December 1860.

Last inspection, 22nd January 1861, by Captain A. Ritherdon.

(Signed) AUG. RITHERDON, Captain,
*First Assistant District Engineer.*

First Assistant District Engineer's Office,
Nellore,
*20th June* 1861.

(Signed) JOHN MULLINS, Captain,
*District Engineer, Nellore.*

Nellore,
*15th October* 1861.

MEMORANDUM.

*Particulars of Extra Establishment.*

| | RS. | A. | P. |
|---|---|---|---|
| Gumáshta P. Narrainapah on Rupees 397-0-3.............. | 4 | 0 | 0 |
| *Sundries.* | | | |
| 4 Mats at 1 Anna each.............. | 0 | 4 | 0 |
| 6 Cotton ropes at 1 Anna 4 Pies each.............. | 0 | 8 | 0 |
| 1 Station book.............. | 0 | 3 | 0 |
| 5 Pots.............. | 0 | 4 | 9 |
| 6 Small pots at 1 Pie each.............. | 0 | 0 | 6 |
| Total... | 1 | 4 | 3 |
| *Contingency.* | | | |
| Printed Forms.............. | 0 | 4 | 0 |

First Assistant District Engineer's Office,
Nellore, 20th June 1861.

(Signed) A. RITHERDON, Captain,
*First Assistant District Engineer, Nellore.*

(Signed) JOHN MULLINS, Captain,
*District Engineer.*

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1 Bill with
1 Enclosure,
1 Original letter.
* Repairing Carpenter's Shed and Engineer Store-yard at Nellore.

Submitted to Government with the recommendation that under the explanation afforded in the foregoing letter, the bill of Rupees 401-0-3* therewith received, may be sanctioned.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 258. ORDER THEREON, 20th November 1861, No. 2,147.

1. The bill is sanctioned.

2. The Honorable the Governor in Council does not consider the explanation furnished to be satisfactory. The buildings to which the present bill refers, were allowed to get worse and worse from 1856 to 60, thereby increasing the cost of the repairs ultimately, and then, on the ground of emergency, the repairs were executed without authority, and no care was afterwards taken as to whether the estimate received the sanction of the proper authorities.

3. His Excellency cannot allow such proceedings. The repairs ought to have been foreseen, and provided for in the annual Budget. Captain Ritherdon will be warned that such negligence will not be tolerated hereafter.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 259. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. BOURDILLON, Esq., Secretary to Government, dated Chepauk, 13th March 1861, No. 10,913:—

SIR,

In reply to the enquiry in the Proceedings of Government, No. 457, dated the 6th instant, I have the honor to state that the sum of Rupees 1,125, required for the restoration of certain

ground at Wellington, the property of Lieutenant Fraser of the Indian Navy, to its original state, can be transferred from the sum* still available at the credit of the District Engineer Presidency, as reported in my letter of the 9th instant, No. 10,786, and to request that the Accountant General may be authorized to make the necessary transfer, and to place the above sum of Rupees 1,125 to the credit of the Special Executive Engineer, Wellington.

* Rupees 25,000.

No. 260. ORDER THEREON, 20th November 1861, No. 2,148.

Recorded, with reference to Government Order, dated 1st July 1861, No. 1,220.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 261. Read the following letter from Lieutenant-Colonel A. J. M. BOILEAU, Government Superintendent and Controller of Pier Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 9th November 1861 :—

SIR,

1. With reference to paragraph 2 of the Proceedings of Government, No. 1,879, dated 10th October 1861, sanctioning a sum of 500 Rupees, in the aggregate, for the construction of three ladders for Passengers and a tub with a whip for hoisting it, I have the honor to forward herewith a copy of a letter from the Pier Agent to my address, showing that the cost of the three ladders alone will be 700 Rupees, a sum which I beg leave to say after looking at one of the ladders which has been fixed in position, and is nearly completed, that I do not think exorbitant, and I am, moreover, of opinion that the work could not have been executed so cheaply by this Department.

1 Copy of letter from J. Miller, Esq., dated 21st October 1861.

2. To the above has to be added the cost of a 'derrick' for hoisting the tub, the cost of which I cannot yet say.

3. Under these circumstances I request that the limit of 500 Rupees may be removed, and that it be left to me to expend for the purpose as much as, with a due regard to economy, I find absolutely necessary for the object in view.

No. 262. ORDER THEREON, 20th November 1861, No. 2,149.

1. The Government will be prepared to sanction the actual charges incurred in making the Pier available immediately. It will be considered in the Marine Department whether the additional charge can also be met from the Port funds.

2. The Government desire that no time be lost in completing the ladders, &c.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 263. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 26th October 1861, No. 52 :—

SIR,

I have the honor to forward an abstract of the estimate for an Office, Storerooms and Artificers' Sheds at Bowanassy, which ought to have accompanied my letter* of the 23rd instant, submitting the above estimate to Government, but which was inadvertently omitted.

* No 49.

*Abstract Estimate of the cost for constructing an Office, Storehouse, and Workshop at Bowanassy.*

| Description of work. | Work already performed. | | | Work still required. | | |
|---|---|---|---|---|---|---|
| | RS. | A. | P. | RS. | A. | P. |
| Office | 3,610 | 6 | 2 | 750 | 13 | 5 |
| Storehouse | 1,953 | 11 | 5 | 313 | 12 | 9 |
| Smith's and Carpenter's Shed | 1,733 | 6 | 10 | 830 | 5 | 10 |
| Total | 7,297 | 8 | 5 | 1,895 | 0 | 0 |

Consulting Engr's. Office,
Irrigation and Canal Company,
Madras, 26th Oct. 1861.

(Signed) F. H. RUNDALL, Lieut.-Colonel,
*Consulting Engr. Irrigation and Canal Compy.*

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No. 264. ORDER THEREON, 20th November 1861, No. 2,150.

Recorded, with reference to the Order of the 9th instant, No. 2,075.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 265. Read the following Proceedings of the Madras Government in the Military Department, dated 15th November 1861, No. 4,153 :—

Communicating a Memorandum from the Quarter Master General of the Army, together with a letter from the Officer Commanding Ceded Districts, stating that the original limits of the Ramandrug Tank have been defined, and promising to submit a Survey thereof as soon as received from the District Engineer. (Vide Military Proceedings, 15th November 1861, Nos. 404-405.)

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No. 266. ORDER THEREON, 20th November 1861, No. 2,151.

Communicated to the Chief Engineer, with reference to Government Order, dated 11th October 1861, No. 1,883.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 267. Read the following Endorsement of the Chief Engineer, dated Chepauk, 11th November 1861, No. 7,041.

Read the following letter from Captain T. E. GAHAGAN, District Engineer of Salem, to Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Salem, 16th October 1861, No. 144 :—

SIR,

1. I have the honor to reply to your letter, No. 4,614, of the 4th ultimo, regarding the new Jail at Salem.

2. The notes taken by the Chief Engineer on the occasion of his visit to the Jail in May last, are certainly incorrect as regards the construction of an *upper room* in the Central Guard-house: an upper room has not been constructed, and the revised plan, a copy of which accompanied my letter No. 184 of the 24th November 1860 to your address, has been closely adhered to.

3. I am sorry, however, to have to report that the additional expenditure (Rupees 467) caused by the construction of Godowns, cannot be defrayed from the sanctioned estimate; for that has already been exceeded, and I find that by the time the jail is completed the excess will amount to about 5 per cent. on the sanctioned estimate.

4. Owing to a gross blunder on the part of my Head Accountant, I was not aware until a very few days ago that any excess whatever had taken place, and was actually on the point of reporting (with reference to your letter now under reply) that there would eventually be an excess of about 1 per cent., when the mistake was brought to my notice by the Head Accountant himself.

In April last he was directed to prepare for my guidance in completing the work an abstract of the net expenditure up to date and of the amount available for expenditure in the current year. in preparing this statement, it now appears that he omitted, on the side of expenditure, all the items which I have marked with a red cross in the statement herewith forwarded (Enclosure No. 1), and that he consequently gave me for the current year *Rupees* 2,797-11-2 more than the amount actually available, such a blunder on the part of a person who has checked the accounts from the very commencement of the work, and prepared all the bills, is indeed inexcusable.

5. On learning the mistake, I immediately went through the valuation statements* which have been prepared from time to time up to the end of the last official quarter (to show rateably the cost of the work); and putting them all together, I found the general valuation thus derived, correct.

* 1. For the work up to October 1859.
2. For the work between October 1859 and April 1861.
3. For the first quarter of 1860-61.

6. Enclosure No. 1, herewith sent, is a copy of this valuation statement or analysis of the cost of construction up to the 1*st August* last, with an abstract annexed of net expenditure up to the 1st instant.

Enclosure No. 2 is an abstract of the sanctioned estimate (for comparison with the analysis in No. 1).

Enclosure No. 3 is a statement of the work remaining on the 1st instant to be done: with one exception (the spiral staircase in the central guard-house) all the items in this statement will be cleared off by the end of the current month. I shall then take the measurements and furnish you with an analysis, made up to the end of the second quarter of the current year, this valuation will be final for all but the staircase, with which I am not now proceeding as there is no urgent necessity for finishing it before the north-east monsoon sets in.

7. With the analysis for the current quarter, I will furnish a comparative Statement of the sanctioned estimate and the actual cost of the work and some explanatory remarks regarding the points of difference. Taking into consideration that a considerable portion of the allowance made in the estimate for sundries and extra establishment is charged in the analysis to different kinds of work, there has been little or no excess in the cost of the masonry;† but in almost all the other items an excess is observable.

† Brick work, arch work, pointing and plastering taken together.

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1 Original letter and three enclosures.

1. Submitted for the information of Government.

2. The District Engineer, it will be observed, reports that by the time the Jail is completed, the sanctioned estimate, Rupees 80,170, will be exceeded by about 5 per cent.

3. Captain Gahagan has been requested to submit a comparative statement, showing respectively the items of the sanctioned estimate, work executed up to 31st October 1861, and that remaining to be done.

4. It has also been pointed out to Captain Gahagan that he is much to blame in the matter of the mistake in the accounts, which has only now come to light, and that it is his duty to look into the accounts and statements of work, and not to trust entirely to his Head Accountant as he appears to have done in this case.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 268. ORDER THEREON, 21st November 1861, No. 2,152.

1. Communicated to the Judicial Department.

2. With reference to paragraph 4 of the Chief Engineer's Endorsement, the Government consider that the Head Accountant is the person to be blamed.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 269. Read the following Endorsement of the Chief Engineer, dated Chepauk, 5th November 1861, No. 6,885.

Read the following letter from Captain T. E. GAHAGAN, District Engineer of Salem, to Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Salem, 23rd October 1861, No. 151 :—

SIR,

1. In reply to your letter No. 6,080 of the 18th instant, I have the honor to state that I have already inspected the new track between Yercaud and Ahtúr.

2. The track is a mere bridle-path, about 4½ feet wide, and is so injudiciously traced, that I am not disposed to recommend the outlay of public money for providing it with bridges.

3. The track appears to me for the most part to follow the line of an old native foot-path, keeping down in the bottom of the gorge as far as possible from Ahtúr and then achieving the ascent by a series of steep and fatiguing zigzags; no advantage whatever being taken of the long spur which slopes down to the line of Railway at Ahtúr.

It is announced in a Madras newspaper* of the 21st instant, that the track is finished and fit for traffic; but this is not the case. One night's heavy rain might wash the greater part of the zigzags away, for they are not drained at all, and their outer sides are unprotected by any revetment; moreover, the turns of the zigzags are dangerously narrow at present.

* "Athenæum and Statesman", Leading Article.

3. Should this route be patronized by the public, as I believe, it certainly will, and a good "bullock road" appear necessary, it will be far better in my opinion for the Government to have a proper trace made with an easy gradient throughout, than to perpetuate the blunder made by the planters; but this track (with some improvements) will do for the present, or until a better one is completed; and I would, therefore, recommend a grant of public money for its improvement equal to the amount already raised by private subscriptions.

4. Enclosed is a sketch, showing with sufficient accuracy the track made by the Planters, and the proper line for a road.

1 Letter from Major Hunter, dated 14th October 1861.
1 Do. from Mr. G. Johns, dated 22nd October 1861.
1 Sketch.
1 Letter from District Engineer, No. 151, dated 23rd October 1861.

1. Submitted to Government for information, with reference to their Proceedings, Nos. 1,957, and 1,966, dated 24th and 25th October 1861, with the recommendation of the Chief Engineer that an allowance be granted equal to what has been subscribed for expenditure upon the road by private parties, viz., Rupees 800, to improve it, as far as practicable, until a better trace has been made on the line pointed out by Captain Gahagan, for which a grant of Rupees 400, or Rupees 50 a mile for a preliminary trace is recommended.

2. The above sum of Rupees 800, in addition to what has been raised by private subscription, will, it is expected, be sufficient to provide wooden platform bridges for the small streams crossed by the present faulty trace, and more than this, is not recommended.

3. It is observed by paragraph 10 of Mr. Norton's letter that there is a cut between Taylor's Hill and Yerkád to be completed, and that Captain Gahagan states that this can be done for Rupees 1,500, to be provided from local funds. Captain Gahagan, however, makes no mention of it in his letter.

4. With reference to paragraph 19 of Mr. Norton's letter, the Chief Engineer begs to state that he has already in his letter No. 6,079, dated 18th October 1861, recommended that for the present, no expenditure should be incurred in completing the bridges on the Yerkád and Mulliapúram line, and he now suggests that the sums mentioned above, viz., Rupees 800, for the improvement of the bullock track from Ahtúr to Taylor's Hill, and Rupees 400, for a preliminary trace, total Rupees 1,200, may be sanctioned for immediate expenditure, from the reserve fund, the sum allotted for the Salem District for repairs generally being small, and unable to bear any additional drain.

5. On the completion of the new trace from Yerkád to Ahtúr, it will be for consideration whether that to Mulliapúram should be abandoned and the maintenance allowance at present provided for it, as per margin, transferred in part or whole to the new line.

Rupees 420, *Vide* Budget for 1861-62, statement No. 3
" 440, *Vide* Procs. of Govt., No. 1,686, dated 10th Sept. 1861.
Rupees 860.

6. The two original letters and sketch received with the above Proceedings of Government are herewith returned.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 270. ORDER THEREON, 21st November 1861, No. 2,153.

1. In these proceedings the Chief Engineer reports on an application from certain gentlemen interested in the Shervaroy Hills, for the formation of a road suited for horses and bullock traffic with wooden platform bridges from the Ahtúr Railway bridge to Yerkád. A bridle-path has already been opened by public subscription in order to show the practicability of the route.

2. There are at present two routes from the Railway to the Hills, one by Mulliapúram and the other by Salem. By the former the distance to Yerkád is 19 miles, and though the ascent is easy the difficulty of procuring means of conveyance is so great that travellers usually proceed to Salem, 26 miles further on. By the Salem Ghát, the distance is now 14 miles, and by the new road under construction will still be 12. The distance by the Ahtúr Ghát will be under 10 miles with an improved trace, so that the adoption of the latter route will effect a considerable saving to travellers in time and distance.

3. The District Engineer states that the trace of the bridle-path is extremely faulty, and he recommends that a grant of Rupees 800 be made for its improvement, as a temporary arrangement. The Chief Engineer supports the recommendation and also requests that a further sum of Rupees 400 be granted for a preliminary trace.

4. The Government sanction accordingly a grant of Rupees 1,200 for the purposes above stated, and they request the Chief Engineer to instruct Captain Gahagan to proceed at once with the trace he suggests—so that if the line prove favorable, such a road as the residents seek may be opened without delay.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 271. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 5th November 1861, No. 6,847 :—

SIR,

1. I have the honor to report for the information of Government that I purpose sending to Beitkál on the Steamer "Dalhousie," which will sail for that Port in a few days, a Pile Driving Machine for the Harbour works, and that as Mr. Thompkinson, the Mechanical Engineer, is, in consequence of ill health, unable to accompany it, I have directed Corporal Banks, Sub-Overseer, 1st Class 3rd Grade, to go in his stead.

2. Corporal Banks, who is an Engine Turner by trade, was withdrawn from his Regiment in 1856 expressly to assist Mr. Thomkinson in working the Pile Machine on the Beach. On the organization of the Department in January 1857, he was appointed Sub-Overseer, 1st Class 3rd Grade, which rank he still holds. Corporal Banks is reported to be a good Mechanic and from the experience he has gained during the last five years in setting up, repairing, and working machinery, either under the orders of the District Engineer Presidency, or under those of Mr. Thompkinson, he is now fully competent to take charge of the Pile Driving Machine, and indeed, next to Mr. Thomkinson, the fittest person to be entrusted therewith, the other Mechanical Engineers not being so well acquainted with the machine.

| | RS. | A. | P. |
|---|---|---|---|
| Military pay as 1st Corporal.. .. .. .. .. .. | 27 | 15 | 3 |
| Compensation in lieu of rations .. .. .. .. | 6 | 5 | 4 |
| Civil salary.. ... .. .. .. .. .. .. .. | 40 | 0 | 0 |
| Total.. | 74 | 4 | 7 |

3. The salary at present drawn by Corporal Banks is, inclusive of Military pay, only Rupees 74¼ per month, a sum by no means commensurate with the important charge which, under the above arrangement, he will in future have ; and considering that Mr. Thompkinson for the performance of similar work receives a salary, under his Covenant of Rupees 310 per month, I am of opinion that it would be only fair to Corporal Banks to increase his salary by promoting him to the grade of Assistant Overseer.

Paragraph 14, Government Notification of the 2nd March 1860.

4. The rules, however, require that a Sub-Overseer should have served seven years in that grade before he can be promoted to the Upper Subordinate Class without passing the prescribed examination, which Corporal Banks has not done ; but as in the Proceedings of Government, No. 1,977, dated 26th October 1861, I am authorised to make the best arrangements in my power for the vigorous prosecution of the works in North Canara without strict regard to the rules, I trust that sanction will be granted for the promotion of Corporal Banks as above recommended to the rank of Assistant Overseer, in which grade there are now three vacancies, and to fill which no passed Candidates have applied.

5. Corporal Banks' salary will then be as follows :—

| | RS. | A. | P. |
|---|---|---|---|
| Civil salary... ... ... ... | 70 | 0 | 0 |
| Military do. ... .. .. ... ... | 27 | 15 | 3 |
| Compensation in lieu of rations. | 6 | 5 | 4 |
| Total... | 104 | 4 | 7 |

No. 272. ORDER THEREON, 21st November 1861, No. 2,154.

Under the circumstances stated, the Government sanction the promotion of Corporal Banks to the rank of Assistant Overseer.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 273. Read the following Proceedings of the Madras Government in the Military Department, dated 8th November 1861.

Read the following letter from Lieutenant-Colonel W. G. WOODS, Adjutant General of the Army, to Colonel H. MARSHALL, Secretary to Government, Military Department, dated Fort St. George, 7th November 1861, No. 809:—

SIR,

1. I have the honor, by order of the Provincial Commander-in-Chief, to request you will be good enough to solicit the sanction of His Excellency the Governor in Council, for the services of Captain G. V. Winscom, Second Class District Engineer, Tinnevelly, being placed temporarily at Major General Budd's disposal, with a view to his being nominated to officiate as Commandant of the Corps of Sappers and Miners, eventually succeeding to the permanent Command of the Corps, *vice* Captain Hill, who has proceeded to Europe on Medical Certificate.

2. Sir A. Cotton has intimated to this Office that Captain Hill expressed to the Chief Engineer, Public Works Department, his preference to be appointed to the charge of a District on his return to India.

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Referred to the Department of Public Works.

(Signed) H. MARSHALL, Colonel,
*Secretary to Government.*

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No. 274. ORDER THEREON, 21st November 1861, No. 2,155.

The Chief Engineer will report whether the services of Captain Winscom can be spared.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 275. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 20th November 1861, No. 7,433:—

SIR,

1. I have received a Telegram from Lieutenant-Colonel Rundall, requesting that immediate arrangements may be made to supply Captain Haig with more funds, as he has only Rupees 20,000 of his allotment of two lacs left, and his expenses are daily increasing.

2. I have the honor, therefore, to request that the Accountant General may be instructed to place the other two lacs, which this Government* have applied to the Supreme Government for, at his disposal, with as little delay as possible, in order that there may be no stoppage for want of funds.

* Proceedings, No. 2,017, dated 31st October 1861.

No. 276. ORDER THEREON, 21st November 1861, No. 2,156.

1. The Supreme Government in July last, promised a further grant of two lacs, in addition to the two lacs in the Budget, and application has lately been made for three lacs; making in all, Budget included, five lacs for the current official year.

2. The Accountant General is requested to place one lac immediately, at Captain Haig's disposal. This sum will suffice for at least two months, and before it is expended the orders of the Government of India will have been received.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 277. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd November 1861, No. 6,774:—

SIR,

1. With reference to the Proceedings of Government, dated 20th September 1861, No. 1,756, paragraph 3, I have the honor to submit the accompanying supplemental bill received from the District Engineer of Madura, amounting to Rupees 225, on account of the deductions made from the salary of Mr. Covenanted Overseer Dudgeon, from January to September 1861, in consequence of his failure to pass the prescribed examination in the Vernacular, and to request that the Civil Paymaster may be authorized to pass the bill for payment.

2. Besides Mr. Dudgeon, no other Covenanted Engineer in his position has been subjected to the penalty, one* having passed the prescribed examination, and further time having been allowed to the other† to qualify in consequence of his transfer from a Telugu to a Tamil District.

* Mr. Hall, Bellary.
† Mr. Evans, Coimbatore.

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No. 278. ORDER THEREON, 22nd November 1861, No. 2,157.

The bill of 225 Rupees submitted with this letter is sanctioned, with reference to paragraphs 3 and 4 of the Proceedings of Government, dated 20th September 1861, No. 1,756.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 279. Read the following Proceedings of the Board of Revenue, dated 8th October 1861, No. 5,461:—

Read the following letter from J. I. MINCHIN, Esq., Acting Collector of Kurnool, to W. HUDLESTON, Esq., Secretary to the Board of Revenue, Chepauk, dated 11th September 1861, No. 108.

SIR,

1. I have the honor to forward copy of a Report from Deputy Collector Ragoonadah Ráu, on special duty in the District, detailing his arrangements for making over the whole land under Class A required for the Irrigation Company in the first section from Sunkasala to Kurnool.

2. A total of 1,738 acres has been made over under Class A, of which 807 acres were Patta land and purchased at a cost of Rupees 5,810-0-7; Rupees 376 were paid for two wells; Rupees 200 for the removal of two Pagodas; Rupees 15 for trees; and Rupees 96-14-0 for some Inám land for which no land could be given in exchange, making a total money expenditure of Rupees 6,497-14-7.

3. Except in the trifling instance abovementioned land was given in exchange for the 481 Acres $23\frac{6}{16}$ Goontas of Inám land taken up. With the exception of 44 acres, 18 Goontas obtained from waste, all this land was taken from Patta lands voluntarily yielded for the purpose, and the total yearly loss of revenue on the whole land made over to the Company under Class A, for this section, amounts to Rupees 1,221-6-11 on acres 1,163.

4. In no case was it found necessary to resort to the provision of Act VI of 1857, and the honest efforts made by the Deputy Collector to value each man's land fairly are I believe fully appreciated by the people, and his arrangements accepted as satisfactory. I have also pleasure in bringing to the notice of the Board the promptitude with which the settlement has been completed, and the land made over to the Company.

5. In the conclusion of his report, the Deputy Collector brings to notice the inadequacy of the Establishment attached to him, for the proper discharge of his duty. I have hitherto endeavoured to afford sufficient assistance from my own office. The Clerk on Rupees 20, and three Peons allotted for the Assistant Collector can remain without inconvenience attached to the Deputy Collector as long as he remains in the District, if no Assistant joins it in that period, but the Clerks on Rupees 25 and Rupees 15, drafted from my own Kacheri, and that of the Deputy Collector Subrayloo Náyudu cannot remain absent for any length of time from their own duties without causing great inconvenience.

6. At the same time the work entailed by the special duty on which the Deputy Collector is engaged is such that it could not be accomplished by his own small Establishment, and the laborious accounts that have to be kept unquestionably require the aid of a skilled Accountant.

7. The business always entails on the Deputy Collector the necessity of keeping large sums of money in his office, for the purpose of making payments on the spot to those whose land is given up for the Company. The services of a Shroff are, therefore, urgently required.

8. The present pay allotted to the Massaljee is not sufficient to secure such a servant for a Stationery office, and no one will accept the place on the constant travelling imposed on the Deputy Collector's Establishment. The Deputy Collector has hitherto made up the pay of this servant out of his own pocket.

9. I therefore beg to recommend that the following additional Establishment be sanctioned for the Deputy Collector, until the completion of his special duty :—

1 Head Clerk on Rupees 35 monthly ;
1 Accountant ,, ,, 25 ;
1 Shroff ,, ,, 10 ;

and that the pay of the Massaljee be raised from Rupees 3-12-0 to Rupees 5 monthly.

10. I would recommend also that travelling allowance be allotted to the Establishment at the same rates allowed to that of the Deputy Collectors on the Inám Commission. Before completion, the special duty on which the Deputy Collector Ragoonadah Ráu is engaged will carry him through the Districts of Kurnool, Cuddapah, and Nellore, and will occupy him probably for at least three more years.

11. I beg also that sanction may be obtained for disbursing to the Deputy Collector the amount allowed to the Deputy Collectors on the Inám Commission for the purchase of office furniture.

12. It will be observed that besides performing his own special duty, the Deputy Collector has the Revenue charge of the two Táluqs in which his work at present lies, and the Assistant Collector's Clerk and Peons may be considered as attached to him for this general duty, in which I have found his assistance of great value.

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From R. RAGOONADAH RÁU, Deputy Collector on special duty, to J. I. MINCHIN, Esq., Acting Collector of Kurnool, dated 9th September 1861, No. 157.

SIR,

1. In pursuance to orders of Government conveyed to me in their Proceedings, dated the 2nd June 1860, directing me to make over the land required by the Irrigation Company in Kurnool, I arrived at this station on the 17th August 1860. From this date to the 24th July 1861, I had little to do in this Department, as the only requisition for land measuring 91-9 acres in Yerragudur was disposed of in 20 days.

2. I also settled all the complaints that had been made in the matter of land taken up at Jorapuram and Cullur, the particulars of which I need not here recapitulate, as several reports were submitted to you on different occasions, as they were disposed of.

3. The first set of tracings that was forwarded by the Consulting Engineer, was received only on the 24th July last. They referred to lands in the latter part of the section from Sunkasala to the Hindry aqueduct. The remaining tracings reached my Office on the 1st August.

4. By the kindness of Mr. Gordon, the Officer in charge of the Central Office of the Company, I had obtained copies of these plans some time before the dates above alluded to, which had enabled me to make all preliminary arrangements for the transfer of lands in the 1st and 2nd, 16th and 17th miles.

5. I was, therefore, able to make over to the Company lands in the latter two miles on the very day on which the first set of tracings reached me. On the 23rd August I communicated to the officers of the Company that they could break ground on the whole length of land of the first section from Sunkasala to the Hindry, having in the meantime inspected, measured, classified, and assessed the said land, and settled its compensation, obtained your sanctions for my settlement, and disbursed the amount thereof to the landowners.

6. The line of the canal in this section runs a length of $17\frac{1}{4}$ miles, and covers an extent of acres $1,738\text{-}0\frac{1}{64}$.

7. The entire section is in Ramalacottah Táluq, and its length is divided between 11 villages.

| | Miles. | Yards. | |
|---|---|---|---|
| Sunkasala... | 0 | 1,566 | 4 |
| Konthalpadu | 0 | 1,742 | 4 |
| Dudiala... | 2 | 431 | 2 |
| Yedurur... | 2 | 906 | 4 |
| Singaveram... | 2 | 442 | 4 |
| Bavapuram | 0 | 1,584 | 0 |
| Nidjur... | 2 | 888 | 8 |
| Moonagalpaud | 1 | 783 | 2 |
| Mamidialpaud... | 1 | 589 | 6 |
| Masamusjid... | 0 | 1,733 | 6 |
| Kullur... | 1 | 492 | 8 |
| Total... | 17 | 606 | 8 |

8. The extent of land made over in each is as follows :—

| | Acres. | Goontas. |
|---|---|---|
| Sunkasala... | 42 | 35$\frac{9}{16}$ |
| Konthalpadu | 40 | 35$\frac{13}{64}$ |
| Dudiala... | 161 | 27$\frac{9}{16}$ |
| Yedurur | 527 | 11$\frac{7}{32}$ |
| Singaveram... | 214 | 26$\frac{9}{16}$ |
| Bavapuram | 89 | 38$\frac{3}{32}$ |
| Nidjur... | 262 | 9$\frac{29}{32}$ |
| Moonagalpaud | 116 | 5$\frac{18}{32}$ |
| Mamidialpaud... | 149 | 35$\frac{23}{32}$ |
| Masamusjid | 76 | 4$\frac{10}{16}$ |
| Kullur... | 56 | 20 |
| Total... | 1,738 | 0$\frac{1}{64}$ |

9. Of this, Patta lands :—

| | Acres. | Goontas. | Assessment. RS. | A. | P. |
|---|---|---|---|---|---|
| Amount to ... | 807 | 0$\frac{1}{4}$ | 789 | 1 | 3 |
| Inám lands | 481 | 23$\frac{6}{16}$ | 0 | 0 | 0 |
| House grounds | 3 | 11$\frac{50}{64}$ | 0 | 0 | 0 |
| Bunjur and Porumboke, &c.... | 446 | 4$\frac{39}{64}$ | 0 | 0 | 0 |
| Total... | 1,738 | 0$\frac{1}{64}$ | 789 | 1 | 3 |

Or

| | Acres. | Goontas. |
|---|---|---|
| The wet, to... | 10 | 8$\frac{5}{16}$ |
| The dry | 1,258 | 9$\frac{53}{64}$ |
| The garden... | 20 | 5$\frac{31}{64}$ |
| The house grounds... | 3 | 11$\frac{25}{32}$ |
| The waste, &c.... | 446 | 4$\frac{39}{64}$ |
| Total... | 1,738 | 0$\frac{1}{64}$ |

10. This extent was owned as particularized below :—

| | |
|---|---|
| Pattadárs... | 134 |
| Charitable institutions | 9 |
| Inámdárs... | 85 |
| House-holders | 18 |
| Total...... | 246 |

11. It is found necessary to remove the whole village of Masamusjid by granting compensation for its loss, or for re-building the houses of the village on another site. Arrangement for this has not yet been made, but will be completed as soon as the rainy weather will pass away.

12. I think the same will have to be done to the village of Sunkasala, and even that of Yedurur. About these I will address you separately when necessary arrangements are completed.

13. Patta lands were purchased at seven years' assessments fixed by me. I was obliged to assess them as they have not hitherto been taxed on any survey and classification, but were paying the amounts which used to be collected in the days of the Nawábs of Kurnool.

14. For the Inám lands as a rule, lands of equal value were given to the Inámdárs, as directed by Government in their Order of the 21st July 1860, No. 1,566, paragraph 5.

15. I obtained these lands thus :—

| | Acres. | Goontas. | Assessment. RS. | A. | P. |
|---|---|---|---|---|---|
| From Bunjur... ... ... ... | 44 | $18\frac{55}{64}$ | 0 | 0 | 0 |
| From the Inámdár's own Patta... ... | 48 | $14\frac{7}{76}$ | 47 | 4 | 10 |
| From lands given up by Inámdárs as best portion of them have been taken up for canal ... ... ... ... | 1 | $37\frac{3}{4}$ | 0 | 0 | 0 |
| From Patta lands of Ryots who voluntarily surrendered them... ... ... | 307 | $25\frac{31}{64}$ | 385 | 0 | 10 |
| Total.... | 402 | $16\frac{17}{32}$ | 432 | 5 | 8 |

Or

| | Acres. | Goontas. |
|---|---|---|
| In the village of Sunkasala... ... ... ... | 3 | $38\frac{32}{64}$ |
| „ Purla ... ... ... ... | 6 | $8\frac{32}{64}$ |
| „ Kontalpaud ... ... ... | 10 | 15 |
| „ Dudiala... ... ... ... | 81 | $17\frac{15}{64}$ |
| „ Yedurur... ... ... ... | 48 | $13\frac{22}{64}$ |
| „ Singaveram ... ... ... | 28 | $7\frac{4}{64}$ |
| „ Bavapuram ... ... ... | 17 | $13\frac{50}{64}$ |
| „ Nidjur ... ... ... ... | 74 | $16\frac{24}{64}$ |
| „ Punchalingala ... ... ... | 3 | $8\frac{24}{64}$ |
| „ Moongagalpaud... ... ... | 36 | $5\frac{48}{64}$ |
| „ Lunjaboy ... ... ... | 5 | 4 |
| „ Mamidialpaud ... ... ... | 30 | $26\frac{40}{64}$ |
| „ Masamusjid ... .. .. | 6 | 21 |
| „ Davanur ... .. ... | 4 | $20\frac{56}{64}$ |
| „ Madliem .. ... ... | 5 | $1\frac{36}{64}$ |
| „ Kullur ... ... ... | 40 | $38\frac{35}{64}$ |
| | 402 | $16\frac{17}{32}$ |

16. In the four cases wherein all these means failed, money compensation on the same principle on which Patta lands were purchased, was awarded.

17. One Inám remains to be settled; some of the owners are absent, and others have requested that some time be allowed them to make their offers.

18. The total sum disbursed for the Patta lands

| | RS. | A. | P. |
|---|---|---|---|
| Amounts to... ... ... ... ... | 5,810 | 0 | 0 |
| For Inám ... ... ... ... ... | 96 | 14 | 0 |
| For two wells ... ... ... ... | 376 | 0 | 0 |
| For the removal of two Pagodas ... ... | 200 | 0 | 0 |
| For the trees ... ... ... ... | 15 | 0 | 0 |
| Total... | 6,497 | 14 | 7 |

19. By the transfer of these lands to the Company, Government have lost an annual revenue of Rupees 1,221-6-11 on Acres 1,163-0$\frac{11}{64}$.

20. In no case I am happy to observe, was I compelled to enforce the provisions of Act VI of 1857.

21. I would never have been able to go through my work with the small establishment allowed me by Government had I not been favored by you with officers of your department, and thus more than doubled the number of my subordinates.

22. I had no idea of the amount and nature of the work I would have to perform in this District, and had thought it would be easier than at Tanjore. I, therefore, asked and obtained a small establishment, hoping that it would be sufficient, taking care to get a clause entered in the Government order, that should further aid be necessary, I should obtain it from Collector's establishment.

23. I now see that I cannot perform as satisfactorily as I should any of my duties with my small establishment, and cannot safely depend upon such an extensive aid as you have afforded being always continued to me here and allowed in other Districts, where probably the work of the Collectorate may be more pressing than here, and other reasons may exist to refuse it to me.

24. You are already aware how necessary it is for me to have good experienced Accountants, a trustworthy personal Assistant with some knowlege at least of English, and a Shroff; and that such men could not be had for the very small pay that is at present allowed, being 20 Rupees for the Clerk and smaller sums for other subordinates.

25. I beg, therefore, to propose that you will be pleased to obtain sanction for the entertainment of an establishment of the following scale to be attached to me till I finish my special duty.

26. Looking at the nature and quantity of work to be performed, my proposal I beg to submit, is very moderate, and hope that you will be so kind as to recommend its grant.

| My present Establishment. | | | Additional one allowed by Collector. | | | Proposed for Government sanction. | | |
|---|---|---|---|---|---|---|---|---|
| Name of the situation. | Salary. | | Name of the situation. | Salary. | | Name of the situation. | Salary. | |
| | RS. | A. | | RS. | A. | | RS. | A. |
| 1 Clerk ... ... ... | 20 | 0 | 1 Clerk ... ... | 25 | 0 | 1 Head Clerk ... ... | 50 | 0 |
| 1 Munshi ... ... | 16 | 0 | 1 Do. ... ... | 20 | 0 | 1 Accountant ... | 25 | 0 |
| 1 Asst. do. ... ... | 13 | 0 | 1 Do. ... ... | 15 | 0 | 1 Deputy do. ... ... | 20 | 0 |
| 2 Peons... ... ... | 12 | 0 | 3 Peons... ... | 18 | 0 | 2 Clerks... ... ... | 30 | 0 |
| 1 Massaljee... ... ... | 3 | 12 | | | | 1 Shroff ... ... ... | 10 | 0 |
| | | | | | | 1 Muchí... ... ... | 10 | 0 |
| | | | | | | 5 Peons ... ... ... | 30 | 0 |
| | | | | | | 1 Sweeper&Massaljee. | 5 | 0 |
| Total... | 64 | 12 | Total... | 78 | 0 | Total... | 180 | 0 |

27. I beg to propose further that these may be allowed travelling allowance at the rates allowed to the establishment of the Deputy Collectors attached to the Inám Commissioner.

28. No furniture has been allowed me, as I made no request on the subject, as the Government Secretary personally told me that my work in this District was to be completed in two months. I now see that a year has already elapsed before one-fourth of the work demanded of me is finished; I therefore beg to request that you will be pleased to obtain Government sanction for the disbursement to me of the amount allowed to the Inám Deputy Collectors for its purchase.

29. I beg to offer respectfully my thanks for the cordial support you have afforded me in the discharge of my duty for having placed the revenue management of the two Táluqs of Ramalacottah and Nundicotcur in my hands which considerably facilitated my operations.

(True Copy.)

(Signed) J. I. MINCHIN, *Acting Collector.*

1. Ordered that the letter above recorded be submitted to Government.

2. In it the Acting Collector reports the arrangements under which the land appertaining to Class A required by the Irrigation Company has been made over in the first Section from Soonkasala to Kurnool.

3. The total extent of land transferred to the Company is 1,738 acres, of which 807 acres were Patta land. The amount of compensation paid for the lands is as follows:—

| | RS. | A. | P. |
|---|---|---|---|
| For purchase of the land ... ... ... ... | 5,810 | 0 | 7 |
| Paid for two wells ... ... ... ... | 376 | 0 | 0 |
| Do. for the removal of two Pagodas ... ... ... | 200 | 0 | 0 |
| Do. for trees ... ... ... ... ... | 15 | 0 | 0 |
| Do. for some Inám land for which other land could not be given in exchange ... ... ... ... ... | 96 | 14 | 0 |
| Total...... | 6,497 | 14 | 7 |

4. Patta land to a large extent was also given in exchange for Inám lands. The loss of revenue on the whole land made over to the Company under Class A in this Section amounts to Rupees 1,221-6-11 on 1,163 acres. It is presumed that Patta lands were given in consequence of waste lands not being available in the same locality.

5. The Board recommend that sanction be granted for the abovementioned money expenditure amounting to Rupees 6,497-14-7.

6. In paragraph 9 of his letter the Acting Collector recommends that the following additional Establishment be sanctioned for the Deputy Collector Ragoonatha Ráu, until the completion of the special duty on which he is now employed, viz.:—

| | RS. |
|---|---|
| 1 Head Clerk ... ... ... | 35 |
| 1 Accountant ... ... ... | 25 |
| 1 Shroff... ... ... ... | 10 |

and that the pay of the Massaljee be raised from Rupees 3-12 to Rupees 5 monthly, the aggregate additional expense being Rupees 71¼ per mensem.

7. The Acting Collector further recommends that travelling allowance be allotted to the Establishment at the same rates as are allowed to the Establishments of the Deputy Collectors on the Inám Commission, and that the allowance for office furniture granted to the latter be also authorized to Ragoonatha Ráu.

8. As it appears from the Acting Collector's report that the special duty on which the Deputy Collector is employed involves the keeping of laborious accounts, and entails the necessity of having large sums of money in his Office for the purpose of making payments on the spot to those whose land is given up for the works; and that the aid hitherto afforded from his own Kacheri and that of the Deputy Collector Soobroyaloo Náyudu cannot be continued any longer without causing great inconvenience, the Board recommend that the temporary Establishment required by the Deputy Collector be granted, to enable him to perform his duties efficiently, together with the allowances for travelling and office furniture drawn by Deputy Collectors on the Inám Commission.

(True Copies and Extract.)

(Signed) W. HUDLESTON, *Secretary.*

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No. 280. ORDER THEREON, 22nd November 1861, No. 2,158.

1. With these Proceedings the Board of Revenue forward a report by Ragunáda Ráu, Deputy Collector on special duty in Kurnool, on the arrangements made by him for the transfer to the Irrigation and Canal Company of the first section, 17¼ miles in length, required for the Canal in that District, as well as the Collector's remarks on the same.

2. The Government highly approve of the promptitude with which the Deputy Collector entered upon and completed this portion of his enquiry. The entire length of the section was ready for the Company within a month after the plans reached Ragunáda Ráu's Office. During this short period 1,738 acres of land had been measured, assessed, classified, &c.; the necessary references made to the Collector; and a sum of Rupees 6,497-14-7 disbursed as compensation, the bulk of which went to holders of Puttah lands. More than 400 acres were given in exchange* for Inám land taken up; and in no case was recourse to Act VI of 1857 found necessary. Ragunáda Ráu deserves much credit for his exertions.

* As per G. O. 21st July 1860, No. 1,566, Public Works Department, paragraph 5.

3. The Governor in Council sanctions the abovementioned expenditure of Rupees 6,497-14-7. The annual loss by the transfer of the lands now reported on, amounts, it is observed, to Rupees 1,221-6-11 on acres 1,163-0$\frac{1}{8}\frac{1}{4}$.

4. The only remaining point requiring notice relates to Ragunáda Ráu's application for an increase of establishment. Both the Collector and the Board consider that he requires additional help. The establishment now allowed is that of a third class Deputy Collector and was sanctioned, as marginally† detailed, in Government Order 21st July 1860, No. 1,566, Public Works Department. In addition the Collector has given over the Clerk on Rupees 20 and the three Peons allotted to the Assistant Collector, whose office is at present vacant in the Kurnool District; and has further supplied two other Clerks from his own and the regular Deputy's, Kacheris. These last named persons, must, Mr. Minchin says, revert at once to their proper duties. He therefore proposes to add a Head Clerk, an Accountant, and a Shroff to the existing staff, and to increase the Mashálchi's pay.

| | RS. |
|---|---|
| † 1 Clerk | 20 |
| 1 Munshi | 16 |
| 1 Assistant | 13 |
| 2 Peons | 12 |
| 1 Sweeper | 3¾ |
| | 64¾ |

5. The establishment would then be —

| | RS. |
|---|---|
| 1 Head Clerk | 35 |
| 1 Accountant | 25 |
| 1 Clerk | 20 |
| 1 Munshi | 16 |
| 1 Assistant | 13 |
| 1 Shroff | 10 |
| 2 Peons | 12 |
| 1 Sweeper and Mashálchi | 5 |
| | 136 |

not including the Assistant's Clerk and Peons, whom the Collector still proposes to leave with Ragunáda Ráu. This establishment, however is smaller than that proposed by the Deputy Collector himself, in paragraph 26 of his report.

6. The Board omit to state whether the proposed additional expenditure can be met from the existing Budget allotment. They will furnish this information and also state for what period the establishment is required. The Deputy Collector cannot require so large an office constantly. The service, moreover, of a Shroff appear unnecessary; the sums to be disbursed from time to time are of course furnished from the Táluq or Huzúr Treasury, and require nothing more than counting out.

7. Should the sanctioned estimate permit, there can be no objection to the grant of travelling allowances to the office establishment, and of a sum for the purchase of office furniture under the ordinary Revenue rules. If the Collector cannot lend such furniture as is really required for the short period during which the Deputy Collector will be in Kurnool, it must be procured in the usual way.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

No. 281. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 13th November 1861, No. 7,141 :—

SIR,

1. I have the honor to bring to the notice of Government, that in consequence of the difficulty experienced in obtaining passed Candidates for the appointment of Sub-Overseers of the 2nd Class, it is likely that the men temporarily entertained under the Orders of the 13th September 1860, No. 1,352, will remain for some time in employ; and as it is necessary in many cases to entrust this class of men with the payment of money, I am of opinion that the same amount of security should be required from them as is required from those of the 1st and 2nd Classes in permanent employ.

2. I request therefore permission to issue to the Department a Circular, to the effect that in all cases of Sub-Overseers temporarily employed, whose services are continued after the first six months under the sanction of Government, the rules regarding security laid down in Chapter XII of the New Code, shall apply equally to them as to those in permanent employ.

3. The Government Solicitor, to whom I have written on the subject, is of opinion that no alteration is necessary in the printed forms of Security Papers for Sub-Overseers at present in use in the Public Works Department.

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No. 282. ORDER THEREON, 22nd November 1861, No. 2,159.

Approved.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 283. Read the following:—

No. 7,055.

*List of Bill received from the District Engineer Madras for works executed on emergency, submitted for the sanction of Government.*

| Audit No. | Date of bill. | Description of work. | Amount. RS. | A. | P. | To what year expenditure appertains. | Remarks. |
|---|---|---|---|---|---|---|---|
| | 1861. | | | | | | |
| 120 | August 12th | Repairing the breaches in the Alloor Tank, Madranticum Táluq. | 73 | 2 | 0 | 1861-62. | Executed under paragraph 3, Clause II, Chapter XXIV, of the New Code. |
| | | Total... | 73 | 2 | 0 | | |

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

Central Office of Public Works,
Chepauk,
11th November 1861.

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No. 284. ORDER THEREON, 22nd November 1861, No. 2,160.

The bill is sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 285. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 9th November 1861, No. 7,027 :—

SIR,

1 Letter from District Engineer, No. 117, dated 9th September 1861.
1 Report, 4-8,528-1861.
1 Do. 8 do.
1 Plan, 1 do.
1 Do. 5 do.
1 Abstract estimate 7 do.
1 Do. 3 do.

1. With reference to paragraph 4 of my letter No. 7,515, dated 30th November 1860, and to Proceedings of Government, No. 1,991, dated 28th October last, I have the honor to forward for submission to Government, Plans, Specifications and two Estimates amounting together to Rupees 6,370, for the under-mentioned works in the District of Salem, viz. :—

| | RS. |
|---|---|
| 1. For constructing a bridge of three arches, 20 feet span, across a jungle stream near Vylaputty, on the Salem and Trichinopoly road... ... ... ... ... ... ... | 3,340 |
| 2. Do. a bridge of one arch of 30 feet span, across a jungle stream near Namcul, do. do. ... ... | 3,030 |
| Total...... | 6,370 |

2. The return taken near Namcul during the quarter ending 31st July 1861, shows an average traffic of 357 carts and 102 pack bullocks per diem.

3. The accompanying Estimates, which have been examined in this Office and the necessary corrections made therein, have been approved by the Collector, and the rates allowed in them are not higher than are absolutely necessary for the construction of the works.

4. The Estimate for the construction of a large stone culvert over a jungle stream on this road near Rozipúr, alluded to in my letter above quoted, has been returned to the District Engineer for revision, and it will be submitted to Government immediately on receipt.

5. As the Government have recognized the great importance of this road, and directed that arrangements be made for the speedy completion of the necessary repair and improvement thereto, I request, therefore, that you will be good enough to obtain the early sanction of Government for the immediate execution of the works, the aggregate amount Rupees 6,370 to be defrayed from the " Reserve Fund" in the Budget for the current official year, as the present allotment of the District, will not admit of this further drain upon it.

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No. 286. ORDER THEREON, 22nd November 1861, No. 2,161.

Sanctioned as proposed.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 287. Proceedings of the Madras Government, dated 22nd November 1861, No. 2,162.—

Read Statement of expenditure upon Public Works up to the 31st August 1861, and of the cash balances on the last day of the month with the Public Works Officers of the Madras Presidency, submitted by the Chief Engineer on the 25th October 1861 :—

1. The Government observe from the Statement of expenditure upon Public Works up to 31st August 1861, furnished by the Chief Engineer, that during the first four months of this year (a good season for work) the total expenditure has not been more than 34 per cent. of the Budget sanction for the year. The per-centage in 1859-60 was 38, and in 1860-61 34, but in both these years there was a large unexpended balance at their close. The Chief Engineer will give his attention to the subject and adopt timely measures for prosecuting the sanctioned works with energy, and transferring funds from Districts in which they cannot, to Districts in which they can be profitably expended.

2. The Chief Engineer will be requested to furnish with the monthly report of expenditure a list of works, the estimate for each of which exceeds 20,000 Rupees, showing the amount of the estimate and the sum expended up to the end of the month.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 288. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th October 1861, No. 6,592:—

SIR,

| | | | |
|---|---|---|---|
| 1 Letter to District Engineer South Arcot, dated 1st August 1861, No. 3,388. | | | |
| 1 Do. from | do. | dated 6th August 1861, | No. 70. |
| 1 Do. to | do. | ,, 18th Sept. | ,, 5,015. |
| 1 Do. from | do. | ,, 24th ,, | ,, 101. |

1. I have the honor to submit for the orders of Government papers, as per margin, from the District Engineer of South Arcot, on the subject of the extra establishments entertained for conservancy purposes in that District.

2. The establishments consist of the following servants:—

*Veranuttum Lock.*

| | RS. | |
|---|---|---|
| 1 Ameen... ...... ...... ...... ...... ...... | 7 | |
| 3 Cottans, at Rupees 4 each...... ...... ...... | 12 | |
| | | — 19 |
| *Rágavien and Mullataur Channel.* | | |
| 4 Cottans, at Rupees 4 each... ...... ...... ...... | | 16 |
| Total per month... ...... | | 35 |

3. The establishment at the Veranuttum Lock is required for opening and shutting the Lock gates and looking after the adjoining Calingulah, and from Extract Minutes of Consultation No. 2,143, dated 13th October 1858, I observe that an application was made by this Government to the Government of India, for sanction to its permanent maintenance at a monthly charge of Rupees 22; but no further orders on the subject seem to have been communicated to this Office.

4. The establishment at the Rágavien and Mullataur channel is employed to look after and attend to the planting of Nánul on the banks separating the head of the Rágavien from the Mullataur, and the head of the Mullataur from the Poniaur, as well as at other parts of the channel. During the last few months Captain Foord states, that head sluices have been built to the channel and an establishment is now more needed than before.

5. Under these circumstances, I have the honor to request that, pending the submission of the General Statement of existing and proposed conservancy establishments for the whole Presidency, the preparation of which has, from various causes been delayed up to the present time, sanction may be granted for the continuance of the payment of the two establishments* abovementioned, from the repair funds placed at the disposal of the District Engineer of South Arcot for the present official year, the entertainment of both establishments appearing to be absolutely necessary.

* Amounting in the aggregate to Rupees 35 per month.

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No. 289. ORDER THEREON, 23rd November 1861, No. 2,163.

Pending the submission of the general statement of existing and proposed conservancy establishments for the whole Presidency, the Governor in Council sanctions the continuance of the Veranuttum Lock and Rágavien and Mullataur channel establishments, at a monthly cost for both of 35 Rupees, as shown in paragraph 2 of the above letter; the money being defrayed, as proposed, from the repair funds at the disposal of the District Engineer of South Arcot for the current official year.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 290. Read the following Proceedings of the Board of Revenue, dated 4th November 1861, No. 6,037 :—

Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, Department Public Works, to the PRESIDENT and MEMBERS of the Board of Revenue, Chepauk, dated 25th October 1861, No. 6,378.

SIR,

* No. 805, dated 30th September 1861, from District Engineer, No. 781, dated 11th October 1861.

Two letters as above, to be returned.

1. I have the honor to forward for the information of your Board, the accompanying correspondence marginally noted* from the Collector and District Engineer of Madura, regarding the opening out of a line of ghât from Goodaloor at the head of the Cumbum valley, to the summit of the ascent in the Madura District in connection with the road now being opened by the Travancore Government across the Hills from Cawnjiapilly.

2. Captain Ryves reports having inspected the ascent (about 1,100 feet in height) to these Hills from the Madura side, and considers that a ghât for bandy traffic (unmetalled) with an average gradient of one foot in 18 could be constructed for about Rupees 8,000, as there are no difficulties of any consequence to be overcome, one stream only of any size to be crossed, and the slopes of the Hills long and easy, except at one place, where it will be necessary to clear away a mass of steep rock, and recommends that a qualified Officer should be appointed for the purpose of tracing a line of ghât at a cost of 500 or 600 Rupees, which the Collector, it will be observed, is prepared to give from the Local Funds of the District.

3. Mr. Levinge, in a letter to my address No. 781, dated 11th October 1861, supporting the project, proposes that the cost of the construction of the ghât shall also be defrayed from the Local Funds, or from the amount in deposit for the water project for the Town of Madura.

No. 5,335, dated 27th September 1861.

4. In my letter to Government I have recommended that the Madura Town water project should be immediately proceeded with by means of the amount in hand for that purpose, and, therefore, this money will not be available.

5. I am not aware what other Local Funds the Collector may have at his disposal, but it appears to me that this is not a work on which such funds should be spent. The ghât, if constructed, will form part of a main line of road leading from the head of the Cumbum valley viâ Pereacolum to Dindigul, or viâ Andeputty to Madura, and should be paid for from Government funds.

6. As the Travancore Government are doing their part of the line, and as it will not be complete unless the ascent from Goodaloor is carried out, I shall have no objection to solicit the sanction of Government to Lieutenant Mead's temporary employment in marking out the line, and to ask for an advance of Rupees 500 from the General Funds of the Madura District to be placed at his disposal for this purpose.

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1. Ordered to be communicated to the Collector for informatian.

* Proceedings to Government, 22nd October 1861.

2. The Board have already laid* before Government the Collector's letter on the subject, and will submit copy of these Proceedings in continuation of the former. They agree with the Chief Engineer in thinking that the work is not one of which the cost should be borne by the Local Fund.

(A true Copy and Extract.)

(Signed) W. HUDLESTON, *Secretary.*

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No. 291. ORDER THEREON, 23rd November 1861, No. 2,164.

The Government are prepared to sanction the arrangements which the Chief Engineer appears from his letter to the Board to contemplate.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 292. Read the following:—

No. 7,054.

*List of Bills received from the Executive Engineer of Bangalore for works executed on emergency, submitted for the sanction of Government.*

| Audit No. | Date of Bill. | Description of work. | Amount. RS. | A. | P. | To what year expenditure appertaining. | Remarks. |
|---|---|---|---|---|---|---|---|
| | 1861. | | | | | | |
| 81 | June 27 | Repairing and whitewashing inside the whole of the buildings attached to European Infantry Barracks in the Cantonment of Bangalore. | 564 | 15 | 6 | 1860-61. | The Executive Engineer explains that these works were sanctioned on emergency by the Officer Commanding the Division under Section II of paragraph 12, Chapter XXIV, of the New Code. He remarks that he had good reason to believe from experience that the cost of each of these works would have exceeded Rupees 500, the limit which the Officer Commanding was empowered to authorize, but as the repairs were necessary as affecting the health of the |
| 82 | ,, | Ventilating eight Staff Serjeants' Quarters of the Horse Artillery in the Cantonment of Bangalore. | 676 | 3 | 0 | Do. | |
| 83 | ,, | Repairing white and bluewashing public buildings of the Horse Artillery in the Cantonment of Bangalore. | 628 | 11 | 3 | Do. | |
| 84 | ,, | Repairing, whitewashing and plastering inside the whole of buildings old Dragoon Barracks in the Cantonment of Bangalore. | 656 | 0 | 3 | Do. | |
| | | Total Rupees...... | 2,525 | 14 | 0 | | |

Troops, and as a reference to this Office would have entailed delay, he considered, that looking to the spirit of the rules, these works came within the province of the Officer Commanding the Division to authorize, and he accordingly carried them out at once. In the case of ventilation provided for the Staff Serjeants' Quarters, Captain Mayne remarks that it was desirable to complete the work before the hot weather commenced, the Quarters being without either light or air. The Executive Engineer was not authorized, when he was aware that the works could not be performed for 500 Rupees each, to commence them without sanction. The rules on this head are clear and should have been conformed to, and the delay in reference to this Office need not have added more than four days to the period of the buildings remaining unrepaired, as matters which are stated to be of an emergent character invariably meet with ready attention in this Office.

The Executive Engineer has been warned to act strictly according to rule in future.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

Central Office of P. W.,
Chepauk,
11th November 1861.

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No. 293. ORDER THEREON, 23rd November 1861, No. 2,165.

1. The bills are sanctioned.

2. The Government approve of the warning given to the Executive Engineer in regard to the carrying out without a reference to the Central Office of works requiring the Chief Engineer's previous sanction.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 294. Proceedings of the Madras Government, dated 23rd November 1861, No. 2,166 :—

Permission having been accorded* by His Highness the Nizam's Government for the transfer of the lands within the Hyderabad territory, required for the Madras Irrigation and Canal Company's works, the Government grant authority for proceeding with the Anicut and Head works across the Tumbaddra river at Sunkasala, for which estimates to the amount of Rupees 1,29,000 were submitted with the Consulting Engineer's letter of 5th October† 1861, No. 37.

* Government Order, 7th November 1861, No. 2,058.

† Government Order, 11th October 1861, No. 1,893

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 295. Read the following Endorsement of the Chief Engineer, dated Chepauk, 11th November 1861, No. 7,043.

Read the following letter from Captain E. HEMERY, District Engineer of Cuddapah, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Cuddapah, 4th October 1861, No. 469 :—

SIR,

1. With reference to paragraph 2 of the Chief Engineer's Miscellaneous Circular, No. XXII of 1861-62, authorizing District Engineer's to re-arrange the funds at their disposal for expenditure on sanctioned works in progress, I have the honor to report as follows.

2. In the Budget statement, No. 2 of 1861-62, the sum of Rupees 5,000 is entered for a road from Yerraguntla to the Codoor station, a distance of five miles.

3. This amount was, I believe, proposed by Major Stewart when Acting District Engineer of Cuddapah, and in the 7th paragraph of his letter, No. 944, of the 27th November 1858, reporting on feeders to the North West Railway, he says with reference to this road : "No. 26 is a short line which will join the very important town of Yerraguntla with the Railway."

4. Now, although printed in large letters on the map, Yerraguntla is in reality a very small village ; good Yepi timber is found in the adjacent jungles and iron ore of a superior quality abounds in the neighbourhood ; considering, however, that in this District there is not one road bridged and metalled throughout, the Collector and myself are of opinion that it would be a great pity to expend so lare a sum as Rupees 5,000 on a comparatively unimportant village track.

5. I have been over the road with Mr. George, 2nd Assistant District Engineer, and we both came to the conclusion that an expenditure of Rupees 1,000 would suffice for a very fair cart road between Yerraguntla and Codoor ; pending further instructions, I have accordingly desired Mr. George to limit the expenditure to that amount.

6. In their Order No. 2,148 of the 23rd November 1857, Government sanctioned an estimate amounting to Rupees 2,020 for a 2nd Class Travellers' Bungalow at Peelair on Trunk Road No. XI, and of this sum, Rupees 1,000 were entered in statement No. 2 of the Budget of 1861-62 for expenditure during the current official year.

7. The estimate for this Bungalow was prepared before the line to be taken by the North West Railway had been finally settled. The want of a bungalow at Peelair is certainly at present a great inconvenience to travellers on Trunk Road, No. XI; but when the Railway is opened to Cuddapah, very few *boná fide* travellers will pass through that place. Under these circumstances I beg to suggest with the full concurrene of the Collector that the estimate for this bungalow should be cancelled.

8. On the other hand I would very earnestly request permission to proceed with the repairs of the direct road from Cu ddapah to Madras.

9. In the Budget statement No. 2 of 1861-62, the sum of Rupees 10,867 was allotted for expenditure on this road during the current official year, out of an estimate amounting to Rupees 1,28,237, but this small sum has already been spent.

10. The North West Railway will probably be opened as far as Kirkambaddi by the end of the year, and it is therefore of the utmost importance that the road beyond that place towards Cuddapah should be made practicable for carts, which it certainly is not at present after heavy rain; the portion between Codoor and Pullampett, a distance of 17 miles, is exceedingly bad, and unless measures are at once adopted to improve it, I anticipate great and very just complaints on the subject on the part of travellers. Even after the completion of the Railway to Cuddapah this road will be of great use in connecting the principal villages of the Rajampett Táluq through which it runs, with the different Railway stations.

11. The Collector is also anxious to see this road improved, but he particularly desires me to apply for permission to proceed with the construction of bridges and tunnels on Trunk Road No. XI, between Guvalcherru and Royachoti.

12. On the 17th April 1857, an estimate amounting to Rupees 55,742 was sanctioned by the late Court of Directors for bridges and tunnels on this line. Two of these bridges between Guvalcherru and Rayachoti were commenced in 1857-58, but all work has been stopped since the Mutinies.

13. In the Budget statement No. 2 of 1861-62, the sum of Rupees 15,000 was entered for expenditure out of the above mentioned estimate, but unfortunately this item was marked A. and the restriction has never been removed. The portion between Guvalcherru and Ryachoti, where bridges are so much required, is not only part of the road from Cuddapah to Vellore, but also from Cuddapah to Bangalore; it is moreover a portion of the road connecting Madanapalli the head quarters of the Sub-Collectorate with Cuddapah and is undoubtedly the most important line of communication in the District.

14. The sanction of Government is therefore solicited on the following points:—

(1.) To reduce the expenditure on the road from Yerraguntla to the Codoor station from Rupees 5,000 to Rupees 1,000.

(2.) To cancel the estimate amounting to Rupees 2,020 for a Travellers' Bungalow at Peelair.

(3.) To proceed with the improvement of the direct Cuddapah and Madras road.

(4.) To proceed with the construction of bridges and tunnels on Trunk Road No. XI, on the distinct understanding that on no account whatever shall the total amount allotted to the district be exceeded.

15. If these arrangements are sanctioned, I shall be able to spend the full sum now at my credit, including that already authorized from the reserve fund.

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1. Submitted to Government.

2. Under the circumstance represented, viz., that Yerraguntla, instead of being as originally reported by a former District Engineer, a "very important town" is in fact only "a very small village" the Chief Engineer supports Captain Hemery's proposition to reduce the expenditure on the road from that place to Codoor, one of the stations on the North West line of Railway, from 5,000 Rupees entered in the Budget of 1861-62 to 1,000 Rupees, thus effecting a saving of 4,000 Rupees, which for the reasons given by the District Engineer, should be expended on the direct road from Cuddapah to Madras, and endeavours will be made to provide still further funds for this object shortly.

3. The Chief Engineer does not recommend that the construction of the Travellers' Bungalow at Peelair be abandoned, for though the Railway to Cuddapah may be finished in a year or two, the Bungalow will always be useful to Travellers on Trunk Road Nos. XI and XII, viz., from Chittoor to Cuddapah, and Chittoor to Bellary, situated, as it is about midway between the two former places.

4. Captain Hemery's proposition to carry on the construction of the bridges and tunnels on Trunk Road No. XI has been considered of sufficient importance to admit of its entry among the items to be expended on the extra $1\frac{1}{2}$ lachs to be allotted to this Presidency.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 296. ORDER THEREON, 23rd November 1861, No. 2,167.

1. The Governor in Council approves of the expenditure on the road from Yerraguntla to the Railway Station at Codoor being reduced from Rupees 5,000 to Rupees 1,000, and to the saving of 4,000 Rupees being applied to the repair of the direct Madras road between Cuddapah and Kirkambaddi.

2. The Governor in Council would defer the construction of the Peelair Bungalow for the present. The number of travellers on that road cannot be large, and will be insignificant when the Railway is opened to Cuddapah.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 297. Read the following:—

No. 6,660.

*List of Bills received from the District Engineer of Bellary, submitted for the sanction of Government, which exceed their respective estimates by more than 5 per cent.*

| Audit No. | Date of bill. | Description of work. | Amount of estimate. RS. | A. | P. | Amount of bill. RS. | A. | P. | Excess. RS. | A. | P. | Percentage of excess. | To what year expenditure appertains. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 171 | 1860. June 60 | Constructing a Guard room and Prisoner's room at Ramândroog and for converting the present building into an Office; sanctioned by Government, dated 19th July 1859, No. 1,735. | 2,240 | 0 | 0 | 2,495 | 7 | 0 | 255 | 7 | 0 | 11.$\frac{13}{32}$ | 1859-60. | The excess shown in this Bill is owing to an alteration in the plan of the building which necessitated the filling up of the arches in front with stone in chunam, and the purchase of two additional teak-wood beams as also the substitution of black-wood for Palmyra rafters. The alteration was ordered by the Officer Commanding the Droog in the absence of the District Engineer; and Mr. Porter, the Officer in charge of the work, carried out the same, reporting the circumstance to the District Engineer, but the latter Officer made no report of it to the Central Office, as he should have done. |
| 175 | 1861. April 25 | 2nd Part Bill, for constructing the Quarters for the Garrison Serjeant Major at Bellary; sanctioned by Government, dated 6th December 1858, No. 2,625. | 2,970 | 0 | 0 | 2,591 | 9 | 1 | 0 | 0 | 0 | ... | 1860-61. | The excess in this Bill is owing to the increase which has taken place in the price of materials and labor since the Estimate was framed, viz., in September 1858. |
| | | Add amount of the 1st Part Bill for do. do., already passed by the Chief Engineer on the 24th Dec. 1859. | 0 | 0 | 0 | 532 | 6 | 5 | | | | | 1859-60. | |
| | | | | | | 3,123 | 15 | 6 | 153 | 15 | 6 | 5$\frac{3}{16}$ | | |
| | | Total...... | 5,210 | 0 | 0 | 5,087 | 0 | 1 | 409 | 6 | 6 | | | |

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

Central Office of Public Works, Chepauk,
31st October 1861.

No. 298. ORDER THEREON, 23rd November 1861, No. 2,168.

1. The Bills are sanctioned.

2. The irregularity on the part of the District Engineer, in omitting to report to the Central Office the alteration in the plan of the building referred to in the first Bill, should be pointed out to that Officer.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 299. Read the following Endorsement of the Chief Engineer, dated Chepauk, 6th November 1861, No. 6,895.

Read the following letter, from G. W. WALKER, District Engineer, North Canara, to the Deputy Chief Engineer, Central Circle, dated Camp Beitkál, 16th October 1861, No. 127 :—

SIR,

1. In forwarding the accompanying communications from my Assistant, Lieutenant Stewart, and from the acting Accountant of his Range, I have only to express my concurrence in the favorable opinion expressed by the former of the latter. He is certainly one of the most promising office servants of the Department in this District, and has always had so much work to do during my two years' tenure of my present post as to preclude all notion of his devoting time to study.

2. The Chief Engineer, in Extract Proceedings No. 658 of 18th May, authorizes a special application to be made to him on Mr. Aranha's behalf, in the event of my failing to obtain other duly qualified persons to fill vacant posts. That of Head Writer in my own Office is filled up by promotion of the Assistant Accountant ; but the latter's place, and the Accountantship of two Ranges, are still vacant, and I should be very glad to be permitted to pay Mr. Aranha the full salary of any of them, which he may elect to fill, for he is perfectly competent to perform their duties.

3. Duly qualified Candidates are very scarce in this District, to fill vacancies in any Department ; and it is no use getting men from other Districts to fill them, as they invariably desert when they see an opening for them elsewhere. It is thus indeed that two out of the three posts abovenamed as vacant, have become and remain so.

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1. Submitted for the orders of Government.

1 Original letter, with 1 enclosure.

2. In April last, the District Engineer North Canara, submitted an application from Mr. F. S. Aranha, then acting* head writer of his Office, requesting exemption from the rule requiring that only passed Candidates shall be employed in situations, the salaries attached to which are above Rupees 25 per mensem.

* Receiving only Rupees 25 out of the salary attached to the post.

3. Mr. Aranha's permanent employment in the public service dates from December 1859, but it appeared from his letter that previous thereto he was employed temporarily and paid from the salaries attached to other appointments.

4. As the rules relating to the examination of uncovenanted servants require that those who have not passed the prescribed test shall have served in the public service for a period of at least five years consecutively, prior to the loss of their appointments, before the sanction of Government can be solicited to their exemption therefrom, and as, moreover, nothing was adduced by the District Engineer, to warrant a special application being made to Government in behalf of Mr. Aranha, he was informed in Extract Proceedings No. 658 dated 18th May 1861, that that individual's request could not be complied with.

5. It will be observed, however, from the foregoing letter from Captain Walker that there are at present three† vacancies in the Office establishments of the District for which it has been found impracticable to obtain the services of passed Candidates, and considering the peculiar difficulties which the North Canara District has to contend with in this respect, and the fitness of Mr. Aranha for the Accountantship of the Sircy Range (in which he has been appointed to officiate by the District Engineer since the despatch of his letter dated 25th April 1861, receiving for his services only 25 Rupees per mensem out of the salary, Rupees 35, sanctioned for the post), I would beg strongly to recommend that sanction may be accorded for his confirmation in that appointment without passing the prescribed examination.

† Assistant Accountant in District Engineer's Office. Accountantship in two Ranges.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 300. ORDER THEREON, 23rd November 1861, No. 2,169.

Under the circumstances stated, sanction is granted for the employment of Mr. F. S. Aranha as Accountant in the Sircy Range on the full salary of that post for one year, provided the services of a passed Candidate are not intermediately available.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 301. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 13th November 1861, No. 7,143:—

SIR,

1. I have the honor to report for the information of Government that there are at present the undermentioned vacancies in the Upper Subordinate Establishment of the Madura District, to fill which no passed Candidates are available.

4 Letters from the District Engineer, Madura, Nos. 44, 127, 324 and 1,023, dated 8th May, 3rd June, 5th July and 29th October 1861.

Two permanent vacancies of Assistant Overseer caused by the dismissal of Mr. Pine (whose vacancy was transferred to Madura), and the death very lately of Mr. Drane.

One temporary vacancy caused by the employment of Mr. Riordan at the People's Park, Madras.

2. Captain Ryves recommends* the following individuals for the vacant appointments:—

* In letter No. 1,023, dated 29th October 1861.

Soobaroy Pillai, Sub-Overseer, 1st class, 1st grade, Trichinopoly District...... *vice* Pine.
Ramachendra Naick, Sub-Overseer, 1st class, 1st grade, Trichinopoly District *do.* Drane.
Mr. R. Ellis, passed Candidate........................................................ *do.* Riordan.

3. The grounds upon which the District Engineer recommends the promotion of Soobaroy Pillai to the Upper Subordinate Establishment are detailed in his letters as per margin, and are as follows:—

Nos 44 and 127, dated 8th May and 3rd June 1861.

(1.) That he has served for several years in the Department, originally as Head Writer and Departmental Maistry in the 6th Division, and as Head Accountant in the Tanjore and Trichinopoly Districts, and subsequently as a Sub-Overseer, 1st class.

(2.) That he has acquired much experience in the Department; that he is thoroughly qualified for the duties of an Assistant Overseer; that he is an able and industrious public servant; that his conduct has always been good; and that a better man could not be obtained for the appointment.

4. With reference to his letters last quoted, the District Engineer was informed in Extract Proceedings, Nos. 808 and 1,952, dated 23rd May and 25th June 1861, respectively, that under the Rules of the 2nd March 1860 no Sub-Overseer could be recommended for promotion to the grade of Assistant Overseer on the ground of distinguished merit, until he had served seven years in the Lower Subordinate Establishment; and that, therefore, I was precluded from submitting his recommendations in favor of Soobaroy Pillai, (whose service as a Sub-Overseer dates only from 24th September 1858) for the favorable consideration of Government, particularly as at the time several candidates for Assistant Overseerships (whose services were available) had passed the prescribed test at the examination held in May last.

5. Under these circumstances, Captain Ryves was requested to report whether he was prepared to accept the services of Mr. Ellis, (the most successful amongst the students of the Civil Engineering College at the last examination), for the temporary† vacancy caused by the employment of Mr. Riordan on other duty. To this arrangement, however, the District Engineer objected in his letter No. 324, dated 5th July 1861, on the grounds; that Mr. Ellis was inexperienced in the practical duties of the Department; and that, if appointed, he would require to be watched over and taught, or be allowed to "fall a victim to the misconduct and dishonesty "of the old lower subordinates and their hangers on." At the same time the District Engineer again strongly recommended the promotion of Soobaroy Pillai; but he was informed in reply, that although this office would not press Mr. Ellis' employment further, the rules of the Department strictly prohibited any recommendation being made to Government in favor of Sub-Overseer Soobaroy Pillai for the reason stated above.

† The two permanent vacancies have only recently occurred under the Orders of Government, No. 1,926, dated 19th October 1861.

6. Considering, however; 1st that the strength of the Department in the Madura District has been considerably reduced, consequent on the Orders of Government, No. 1,926, dated 19th ultimo; 2nd, that there are now three vacancies in the Upper Subordinate Establishment allotted thereto; 3rd, that no passed Candidates are at present obtainable for the vacant posts; and 4th, that unless the vacancies are filled, the works in the District, for which large additional sums have lately been sanctioned, cannot be efficiently supervised, I have the honor strongly to recommend that, as a special case the sanction of Government may be accorded to the temporary appointment of Sub-Overseer Soobaroy Pillai to the vacancy caused by the dismissal of Mr. Assistant Overseer Pine, until such time as he is qualified under the rules to hold it, or a passed Candidate is available.

7. With regard to the second individual recommended for promotion, the District Engineer has been requested to report upon his qualifications for the post of Assistant Overseer and his past services in the Department. His reply, on receipt, will be submitted for the orders of Government.

8. As respects Mr. Ellis, who is recommended by the District Engineer to act for Mr. Assistant Overseer Riordan, I beg to state that since the receipt of Captain Ryves' letter, No. 324, dated 5th July last, he has been permanently appointed to the Department, and is at present attached to the Kurnool District.

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No. 302. ORDER THEREON, 23rd November 1861, No. 2,170.

The temporary appointment of Sub-Overseer Soobaroy Pillai is sanctioned, as proposed in paragraph 6.

(Signed) J. D. SIM,

*Secretary to Government.*

No. 303. Read the following Endorsement of the Chief Engineer, dated Chepauk, 26th October 1861, No. 6,460.

Read the following letter from Major SHAW STEWART, Acting District Engineer, Vizagapatam, to the Deputy Chief Engineer, Northern Circle, dated Camp Pálcondah, 2nd October 1861, No. 709 :—

SIR,

No. 4,445, of 29th August 1861.

1. In reply to the communication marginally noted, I have the honor to state that I deferred submitting the report called for, until I could speak of both routes from personal knowledge, which I am now, in some measure, able to do.

2. Of the two lines mentioned by the Collector, that *viâ* Galikondah and Jeypoor is of vital importance to this District. A very good bullock track now leads from Vizagapatam, *viâ* Sringwarapacottah and Kasipoor, over the Galikondah Range, as far as Harris' Valley. From this point to Jeypoor, a distance of sixty miles, the track is rougher and more difficult. An immediate expenditure of Rupees 150 per mile, would greatly improve it, and would doubtlessly give a great impetus to traffic. In order to reach the Nagpore cotton-growing country, this track should also be taken on as far as the town of Jugdulpoor, a further distance of forty miles.

Government Order, No. 924, of 4th May 1860.
* Chief Engineer's communication, No. 534, of 15th May 1860.
Government Order, No. 2,172, of 20th October 1860.

3. A bullock track is, however, quite inadequate to the ever-growing traffic on this line, and Government have* already directed a survey for a cart road to be made. From several causes, this Survey was not begun when I took charge of the District in February last. It is now completed from Vizagapatam to a point near Kasipoor at the foot of the Galikondah Range. As soon as the rains are partly over, I intend to carry on the survey, and I hope to take it to Jeypoor during the present season.

4. The second line mentioned by the Collector would lead from Parvatipore to Ryaguddah, and thence by Singapore, Joonagudda and Kareeall, to Raipore. A few days ago I inspected as much of this line as I could; but the rivers were all in flood, and the state of the country prevented my reaching Ryaguddah. From what I saw, and from the enquiries I made, I am certain that an expenditure of Rupees 200 per mile would make a capital road for bullocks. Mr. Fane, who has gone further along this line than I was able to do, agrees with me. Parvatipore is now joined to the port of Calingapatam by a good cart road, leading through Pálcondah and Chicacole. Ryaguddah lies about 30 miles due north of Parvatipore :—Singapore about 30 miles from Ryaguddah, a little to the west of north ;—and Joonagudda about 40 miles from Singapore, in a north-westerly direction. The boundary of this District lies about ten miles beyond Singapore ; but Mr. Fane is anxious that the line should be opened out by us as far as Joonagudda, the capital of Kalahundry, and that the Nagpoor authorities should continue it to Raipore.

5. Useful as this latter route would doubtlessly prove, it is not to be compared in its importance to this District, with the former line, *viâ* Jeypoor. The port of Calingapatam is in the Ganjam District, and there is another and a more direct route which leads thither from Raipore, viâ Kareeall, Daudpore, Bissumcotto, and Goonipooram. On the other hand, the Jeypoor route would, if opened out, both greatly develope the cotton trade, and would throw open the Galikondah range of hills and the large Jeypoor Zamíndári. Alike on commercial and on political grounds, this would be most desirable. I have already said that the bullock track which now leads over the Galikondah hills might be continued to Jeypoor and thence to Jugdulpoor, the capital of Bustar, at an average cost of Rupees 150 per mile, or of Rupees 15,000 for the whole distance. This would, however, only serve as a temporary measure, and a cart road would have to follow almost immediately. In my opinion, the cart road should be at once begun.

6. I regret that I cannot send along with these remarks a sketch map to show the routes and the places alluded to. I shall have one prepared as soon as I return to my head quarters, and shall send it to follow this in a few days.

1. Submitted to Government, with reference to their Proceedings of 26th August 1861, No. 1,706.

2. The District Engineer represents that a very good bullock track already exists over the Galikondah Range as far as Harris' Valley, but beyond this for 60 miles, it is more difficult, though, with an immediate expenditure of Rupees 150 per mile, it might be greatly improved; to reach the Cotton country however, the track should be extended to Jugdulpoor in Bustar, a further distance of 40 miles. The District Engineer further states that a bullock track is inadequate to the ever-growing traffic of the country, and that the survey of the cart road ordered in May last has progressed as far as the foot of the Galikondah Range, and will be carried to Jeypore during the present season.

3. In the second line mentioned by the Collector from Parvatipore, *viâ* Ryagudda and Joonagudda to Raipore, the District Engineer is of opinion that 200 Rupees per mile would make a good road for bullocks, but though the line would be very useful it is not to be compared in importance to the Vizagapatam District with the former line, which, both on commercial and political grounds he considers the most desirable, and for which he recommends an *immediate* outlay of Rupees 150 per mile, or Rupees 15,000 for the whole distance as far as Jugdulpore, and the eventual construction of a cart road for the whole distance.

4. The sketch map promised by the District Engineer will be forwarded as soon as it has been received.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 304. ORDER THEREON, 23rd November 1861, No. 2,171.

1. The Government concur with the District Engineer in attaching greater importance to the Jeypore line. A very good bullock track has been formed from Vizagapatam to Harris, Valley, and for its continuation to Jeypoor (60 miles) the Government grant Rupees 9,000, to be drawn from the funds lately promised by the Supreme Government.

Government Proceedings, dated 29th October 1861, No. 2,003.

2. The Government will forward the correspondence to the Commissioner at Nagpore, in view to his considering the expediency of his simultaneously extending the track to the capital of Bustar.

(Signed) J. D. SIM,
*Secretary to Government.*

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Ordered that the following letter be despatched.

No. 305. From J. D. SIM, Esq., Secretary to the Government of Fort Saint George, to the Commissioner of Nagpore, dated 23rd November 1861, No. 2,172.

SIR,

1. I am directed to forward for your information the accompanying communication from the Chief Engineer, dated 26th October 1861, No. 6,460, regarding the opening up of the communications between the Raipore District of Nagpore and the coast, with the view of promoting the trade in Cotton, &c.

2. You will observe that two such communications are mentioned, one by Jeypore and Galikonda and the other by the Ryaguddah route. This Government concur with the District Engineer in attaching greater importance to the Jeypore line. A very good bullock track has been formed from Vizagapatam to Harris' Valley; and for its continuation to Jeypore (60 miles) this Government are about to grant the sum stated to be necessary, viz., Rupees 9,000. They desire me to request your attention to the subject, in the hope that you will consider the expediency of the track being simultaneously extended to the capital of Bustar, and that you will take the necessary steps for effecting that end within your jurisdiction.

No. 306. Read the following letter from F. AGNEW, Esq., Agent, Madras Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 20th November 1861, No. 1,722 :—

SIR,

I have the honor to hand you the enclosed Draft on the Sub-Treasurer for (Rupees 10,000) *ten thousand*, which has been refused payment for the reason stated thereon; and I shall feel obliged, if you will be so good as to issue the necessary instructions for the payment of my Drafts, during the absence of the Consulting Engineer, in accordance with the Order of Government, No. 2,093 of the 11th instant.

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No. 307. ORDER THEREON, 23rd November 1861, No. 2,173.

Transferred to the Accountant General, with reference to Government Order, dated 11th November 1861, No. 2,093.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 308. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 25th October 1861, No. 6,385 :—

SIR,

1 Account Current (in original.)
1 Letter to Town Major, 20th April 1858, No. 9,163.
1 Do. from Brigade Major, 7th October 1861, No. 3,968, with one enclosure.

1. In Extract Minutes Consultation, dated 21st December 1857, No. 2,356, the Government before sanctioning a Bill of Rupees 11,784-15-0, for the erection of the Perambore lines, requested to be informed on what date the estimate for the work, viz., Rupees 42,757-13-10, was sanctioned.

2. When adjusting the expenditure of the late Garrison Engineer's Department for the year 1856-57, it was found that the above enquiry had never been replied to by this Office, and at this distance of time, I am unable to account for the omission which, however, I beg now to supply.

3. It is observed that the late Town Major, in a letter to Government, dated 31st July 1854, No. 2,376, suggested certain modifications in the plan of the huts at Perambore, and forwarded* two estimates of the Contractor, Parthasardy, amounting respectively to Rupees 42,757-13-10 and 43,307-11-1. As the Government concurred in the opinion expressed by Major Thompson, that the modified plan would not involve any additional expense, they sanctioned the former estimate in their Order, dated 8th August 1854, No. 2,152, but did not specify the amount thereof in the Order in question.

* See enclosure to letter from Brigade Major, dated 7th October 1861, No. 3,968.

Military Department.

4. I regret to state that the Bill of Rupees 11,784-15-0, forwarded to Government on the 5th November 1857, No. 4,970, cannot now be found on the records of this Office. I beg to forward, however, copy of an Account Current between the late Garrison Engineer and the

Contractor, whereby it will be observed that work to the extent of Rupees 3,527-1-2, was performed in addition to the estimate of Rupees 42,757-13-10. This extra work was carried out by Captain Rawlins under the instructions of the Right Honorable the Governor, as communicated in letters† from the late Town Major.

† 9th and 24th January 1855, Nos. 79, and 259.
27th June 1855, No. 2,254.
4th July ,, ,, 1,914.

5. Under the above explanation, I request that the sum of Rupees 11,784-15-0 may be sanctioned, to admit of the adjustment of the Garrison Engineer's expenditure for the year 1856-57 being finally closed.

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No. 309. ORDER THEREON, 23rd November 1861, No. 2,174.

1. The Bill is sanctioned.

2. Enquiry will be made in the Military Department as to the present condition of the lines.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 309A. Read the following Endorsement of the Chief Engineer, dated Chepauk, 18th November 1861, No. 7,308 :—

Read the following letter from Captain G. W. WALKER, District Engineer, North Canara, to the Deputy Chief Engineer, Central Circle, dated Camp Beitkál, 31st October 1861, No. 136.

SIR,

In acknowledging receipt of sanction for Rupees 1,100 on account of Tuddry Buoys conveyed in your Order No. 5,946 of 15th October, I have to express my hopes that the Buoys themselves will be sent round by the same vessel which convey Stores to Sedasheghur. Moreover, that immediate application will be made to the Bombay Government for the services of Captain Fraser, Commanding Her Majesty's Steamer "Falkland" and of his crew, for the purpose of fixing the Buoys, according to the terms of my letter No. 84 of 12th August. Captain Fraser and his ship may be ordered to Bombay at any moment, in which case it will be difficult if not impossible to accomplish the work for the sum sanctioned.

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From Captain G. W. WALKER, District Engineer, North Canara, to the Deputy Chief Engineer, Central Circle, dated Camp Beitkál, 1st November 1861, No. 137.

SIR,

In continuation of my letter No. 136 of 31st October, I have the honor further to recommend that the services of Captain Fraser and his crew of the "Falkland," be obtained, for removing the Screw Moorings now at Tuddry and putting them down in Beitkál Bay; a sum of Rupees 1,000 being made available for the purpose from the General Funds already at my disposal. I have the best authority for stating that the Bombay Government will willingly accede to any requests of this nature, but no time should be lost in communicating with them by telegraph.

1. Submitted to Government with a request that they will be pleased to apply by telegraph to the Bombay Government for the services of Captain Fraser, Commanding Her Majesty's Steamer "Falkland" and of his Crew, to be employed in fixing at the mouth of the Tuddry River the Buoys now at Madras, and which the Superintendent of Marine has been requested to send round by the Brig "Teak," now in the Roads to Tuddry, and further in removing the Screw Moorings now at Tuddry and putting them down in Beitkál Bay.

1 Letter from District Engineer, North Canara, No. 136, dated 31st October 1861.
1 Do., No. 137, dated 1st November 1861.
Proceedings of Government, No 1,737, dated 17th September 1861.

2. Government will observe that the District Engineer has the best authority for stating that the Bombay Government are quite disposed to accede to this request.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 309B. ORDER THEREON, 23rd November 1861, No. 2,174A.

Application will be made accordingly to the Bombay Government.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 310. Read the following letter from Lieutenant-Colonel F. H. RUNDALL, Consulting Engineer for Irrigation and Canal Company, to J. D. SIM, Esq., Secretary to Government, dated Madras, 28th October 1861, No. 55:—

SIR,

With reference to the Proceedings of Government of the 29th August last, No. 1,640, I have the honor to observe, that in a reply to an objection in one of my Audit Memoranda to the item of the salary for an Apothecary at Bowanassy, the Chief Engineer observed; that the appointment was amongst the first that were made, and that it had been duly reported to the Agent, who acknowledges the circumstance, and concludes, the appointment was made on the supposition that it was provided for under the general sanction for preliminary arrangements. It appears to have been inadvertently omitted from the list of Establishment which was submitted to Government on the 27th February 1861, No. 131, and from the monthly Pay Abstracts not having at that time been punctually rendered to my Office, the omission escaped my notice. I would therefore beg that it may now be sanctioned.

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No. 311. ORDER THEREON, 25th November 1861, No. 2,175.

The appointment is sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 312. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Secretary to Government, dated Chepauk, 29th October 1861, No. 6,535:—

SIR,

1. I have the honor to report for the information of Government, that the District Engineer Tanjore having, in his letter Nos. 390 and 391, dated 12th March 1861, recommended the temporary employment as Sub-Overseers of the 2nd Class [3rd Grade, (*vice* Tirumallay dismissed and Edmonds] resigned of the undermentioned individuals, on the grounds stated opposite to each, their entertainment for a period not exceeding six months was sanctioned by this Office in Extract Proceedings, No. 12,175, dated 18th April last.

2 Letters from District Engineer Tanjore, Nos. 390 and 391, dated 12th March 1851, with two accompaniments.
2 Letters from do., Nos. 132 and 172, dated 11th September and 16th October 1861.

*Vencatarama Iyer.*—Is generally intelligent; possess a slight knowledge of English; understands plans and sections of Masonry works; can frame estimates for ordinary works; is able to lay down and construct an ordinary building from working-drawings and specifications; can superintend workmen; has been employed in the Department Public Works both in the Executive as well as in the Office branches; understands well the forms of accounts in use in the Department, and although not capable of passing the prescribed examination, is able to perform the duties usually devolving on a Sub-Overseer.

*Dorasawmi Iyengar.*—Is generally intelligent; can frame estimates for ordinary works; can direct workmen; is able to lay down and construct an ordinary building from working-drawings and specifications; has been employed for three years as a Maistry; has during that time carried out several important works; is exceedingly active, and understands the system of accounts in the Public Works Department; and although unable to pass the prescribed examination, is nevertheless, from his experience and general intelligence, capable of performing very satisfactorily the duties of a Sub-Overseer.

2. Dorasawmi Iyengar and Vencatarama Iyer entered respectively upon their duties on the 13th and 31st March last; and as the period for which their temporary employment was authorized, expired on the 12th and 30th ultimo, the District Engineer Tanjore, in his letters marginally noted, requests that the sanction of Government may be obtained for the continuance of their services; the former up to the 31st instant, and the latter until a passed Candidate can be obtained permanently to fill the post in which he is now officiating.

Nos. 132 and 172, dated 11th September and 16th October 1861.

3. Considering that both parties possess practical experience for the performance of their duties; that none other better qualified can be obtained; that their conduct during the past six months has been good; and that they have afforded satisfaction to Sub-Engineer Atchuta Naidu, under whom they have been employed, I beg that the District Engineer's proposition may receive the sanction of Government.

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No. 313. ORDER THEREON, 25th November 1861, No. 2,176.

Under the circumstances represented, the Government sanction the continued employment of Vencatarama Iyer and Dorasawmi Iyengar, as Sub-Overseer, 2nd Class, 3rd Grade, in the

Tanjore District, for a period of twelve months more, provided no passed candidate is intermediately available.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 314. Read the following Endorsement from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 16th November 1861, No. 7,271:—

Read the following letter from Major SHAW STEWART, Acting District Engineer Vizagapatam, to Lieutenant-Colonel F. H. RUNDALL, Acting Deputy Chief Engineer Northern Circle, Chepauk, dated Waltair, 2nd November 1861, No. 844:—

SIR,

1. In acknowledging the receipt of your communication,* as per margin, I have the honor to state that no extra expense whatever will be entailed on Government by the employment of the C. Company of Sappers upon the Galikondah Ghát.

* No. 6,419, of 25th October 1861.

2. A sum of Rupees 3,000, was sanctioned by Government for the purpose on the 30th January† 1860. Of this a sum of Rupees 380 still remains unspent. The Rajah of Vizianagram also liberally subscribed Rupees 2,000 towards the same object, as reported in my letter‡ to you of the 19th July 1861. About half of this latter sum has been spent, so that I have altogether about Rupees 1,400 available for the work.

† G. O. No. 234.

‡ No. 385.

3. The working pay of the Company of Sappers will perhaps average Rupees 150 per mensem. The work which remains to be done, will probably be finished in six months. This will absorb about Rupees 900; and the remaining Rupees 500 will be spent in cooly hire and sundries. I have now plenty of tools for the work, so that there will be no further expense under this head.

4. The work required to complete the new bullock road over the hills, consists almost entirely of rock blasting. In that locality, it will be almost impossible to execute this without the aid of Sappers, except at the cost of much time, trouble, and money. I most earnestly beg that the Chief Engineer will be pleased to second Sir George Whitlock's recommendation, that the C. Company of Sappers, should be immediately made available for the work. Of all the works projected in this District, there is undoubtedly none which will benefit it nearly so much as the opening out of the Galikondah range. The most favorable season for work there has already commenced, and is now fast passing away. I would therefore urge that no further time should be lost in complying with a recommendation which is so strongly supported by all the authorities interested in the welfare of the District.

5. I beg that the order for the employment of the Sappers may be sent by a telegram.

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1. Submitted to Government, with reference to their Proceedings, dated 22nd October 1861, No. 1,934.

2. It will be observed that funds are available in the Vizagapatam District for meeting the working pay of the Company of Sappers and Miners employed on the Galikondah Ghát, and also that the Chief Engineer has recommended§ a sum of Rupees 9,000, to be allotted for the extention of the road from Galikondah towards Jeypore from the 1½ Lac Fund.

§ Letter No. 7,067, dated 11th November 1861.

3. The District Engineer warmly urges the continued employment of the Company on this Ghát, and the Chief Engineer trusts his application will meet with the approval of Government, an early communication of which is solicited.

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No. 315. ORDER THEREON, 25th November 1861, No. 2,177.

Communicated to the Military Department, with reference to the Order in this Department, 22nd October 1861, No. 1,934, in view to orders being issued for the continued employment of the C. Company of Sappers on the Galikondah Ghát, if the arrangement is unobjectionable on Military grounds.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 316. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 13th November 1861, No. 7,166:—

SIR,

1. I have the honor to report for the information of Government that owing to the difficulty of obtaining a passed Candidate, it has been found impracticable to supply the District Engineer Cuddapah, with the additional Assistant Overseer authorized by Government in their Proceedings marginally noted, to be entertained in his District during the absence of Mr. Sub-Engineer Arnold on Medical Certificate.

1 Letter from Serjeant Newton, with three enclosures.

No. 1,718, dated 13th September 1861.

2. In the accompanying letter Serjeant J. Newton of Her Majesty's 105th Madras Light Infantry, has forwarded to the Deputy Chief Engineer Central Circle, with a view to again obtaining employment in this Department, a statement of his past services therein, accompanied by testimonials granted to him by two of the Officers under whom he served.

3. Serjeant Newton originally entered the Public Works Department as an Assistant Overseer in October 1854, and remained therein until August 1857, when, in consequence of the restrictive orders, he was remanded to his corps. During the period just mentioned Serjeant Newton was employed in the Nellore and Cuddapah Districts, and from the accompanying testimonials granted to him by Captains Hemery and Crofton, it will be seen that he was always attentive and zealous in his duties and afforded his superiors every satisfaction.

*Vide* page 1,114, Fort Saint George Gazette, dated 6th October 1854.

4. Lieutenant-Colonel Boileau, moreover (under whose orders Serjeant Newton was for some time employed in the 2nd Division), bears very favorable testimony to his conduct and qualifications, and is of opinion that he will be found of much use in the Cuddapah District.

5. Under these circumstances, and in the absence of a passed Candidate, I have the honor strongly to recommend, that the sanction of Government may be accorded to the temporary employment of Serjeant Newton as an Assistant Overseer in the Cuddapah District.

6. In the event of Government acceding to my recommendation, I beg that the Provincial Commander-in-Chief may be moved to place the services of the Serjeant at the disposal of this Department.

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No. 317. ORDER THEREON, 26th November 1861, No. 2,178.

1. Under the circumstances stated, the Government sanction the entertainment of Serjeant Newton if available, as an additional Assistant Overseer in the Cuddapah District, during the absence of Mr. Sub-Engineer Arnold on Medical Certificate.

2. Application will be made through the Military Department for the services of Serjeant Newton.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 318. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 14th November 1861, No. 7,174 :—

SIR,

1 Letter from the District Engineer Malabar, No. 157, dated 21st September 1861, with one enclosure.
1 Letter from the District Engineer Coimbatore, No. 336, dated 30th October 1861.

1. With reference to paragraph 11 of my letter, No. 4,453, dated 29th August last, and to the Proceedings of Government thereon, I have the honor to state that the District Engineer Malabar having been instructed in the Proceedings of this Office, No. 4,662, dated 5th September 1861, to place himself in communication with the Officer Commanding Her Majesty's 66th Regiment at Cannanore, with a view of ascertaining whether there were any men therein competent to act as Assistant Overseers, who might be employed on on the Kárkoor Ghát, receiving from the estimate a salary of Rupees 50 per mensem in addition to Military pay, that Officer reported in his letter No. 157, dated 21st idem, that Lieutenant-Colonel Maxwell had intimated to him that there was a Private (Lloyd Webb) in his Regiment formerly attached to the Army Works Corps, and subsequently employed in the construction of roads in the Crimea, who, he considered would be found useful on the Ghát.

2. Captain Bean however, reported that he would not require Private L. Webb's services, for the Kárkoor Ghát; as Serjeant Campbell of the Sappers and Miners had already been appointed thereto, and what was wanted was good native agency.

3. On the receipt of the foregoing letter from Captain Bean, the District Engineer Coimbatore, was requested to state whether he was desirous of availing himself of, the services of

Private Webb for carrying out the Goodaloor Ghát Trace, and he has just informed me in his letter No. 336, dated 30th ultimo, that he is willing to do so on the condition mentioned in paragraph 1.

4. With a view therefore to meet the requirements of Captain Goddard, I have the honor to request that the Provincial Commander-in-Chief may be moved to place the services of Private Lloyd Webb of Her Majesty's 66th Regiment, at my disposal for temporary employment on the Goodaloor Ghát.

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No. 319. ORDER THEREON, 26th November 1861, No. 2,179.

On a re-consideration of the orders conveyed in Government Order, 30th September last, paragraph 5, the Government are of opinion that the grant of Rupees 5,000 had better be expended in improving the road between the foot of the Kárkoor Ghát and Mambat. The Chief Engineer will arrange accordingly.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 320. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 30th October 1861, No. 6,634;—

SIR,

1. With reference to the Proceedings of Government, No. 1,940, dated 22nd October 1861, I have the honor to observe that the report relative to the alleged robbery of public money from the cash chest of Assistant Overseer Pine, in the Trichinopoly District, was forwarded to Government immediately on receipt in the Central Office, in conformity with their wishes, as expressed in their Orders No. 40, dated 9th January 1858, and No. 1,478, dated 10th July 1860.

2. It was, moreover, necessary to submit to Government the entire correspondence relative to the above robbery, as in my Endorsement No. 5,788, dated 10th October 1861, it was recommended that the deficiency in Mr. Pine's cash chest should be recovered from the security deposited by that individual, the authority to direct which rests with Government alone, as will be seen from a reference to paragraph 10 of Chapter XII of the New Code, under which, security once deposited by any member of the Department, can be returned to the party or otherwise appropriated only on the orders of Government.

3. As my proceedings are thus shown to have been in accordance with previous orders of Government, I request to be informed whether I am to consider the present order as cancelling those which have gone before, as if so, it will be necessary for Government to issue instructions to the Collectors to refund money deposited as security upon my requisition.

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No. 321. ORDER THEREON, 26th November 1861, No. 2,180.

The Government desire that the Rules may be so modified as to enable the Chief Engineer to deal with the securities of his Subordinates on his own responsibility, without the necessity of a previous reference to Government.

(Signed) J. D. SIM,
*Secretary to Government.*

Read the following papers :—

No. 322. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 8th November 1861, No. 6,972 :—

SIR,

1 Letter from District Engineer Coimbatore, No. 212, dated 9th August 1861, with three enclosures.
1 Do. from do., No. 281, dated 1st October 1861, with five enclosures.
1 Letter from District Engineer Madura, No. 761, dated 24th September 1861, with one enclosure.
1 Do. from late Special Executive Engineer Wellington, No 63, dated 26th August 1861.
1 Do. from Civil Surgeon Coimbatore, No. 154, dated 25th October 1861.

1. I have the honor to forward for the consideration and orders of Government the correspondence as per margin, on the subject of Mr. Covenanted Overseer Evans, at present attached to the Coimbatore District.

2. In his letter No. 212, dated 9th August 1861, the District Engineer Coimbatore, brought to notice that owing to defective education, irregular habits, and want of natural intelligence, Mr. Evans was unable satisfactorily to discharge the duties entrusted to him, and requested that he might be removed from the District, and another European Overseer appointed in his stead.

3. In support of his statements, relative to Mr. Evans' defective education and his deficiencies as an Overseer, Captain Goddard submitted an original letter from that individual, as well as a rough sketch of the Ambravatty River ; and of the road from Ambravatty to Salem, the preparation of the latter of which was represented to have occupied him 17 days.

4. As however, Colonel Rundall in his letter No. 44, dated 16th February 1860, had expressed a most favorable opinion of Mr. Evans' general attainments and commended his zeal and faithfulness as an Overseer while employed* under his orders in the Godavery District, and as moreover, it was evident from the above, as well as from Mr. Evans' testimonials, that he not only did good service in the Godavery District, but was also capable at that period of doing good and effective service in any other District, the only conclusion that could be arrived at in the matter was that the Overseer's present inefficiency, as reported by the District Engineer Coimbatore, was owing to old age, or irregular habits, or to both conjoined.

* From the middle of 1855, to the close of the year 1859.

5. Under this view the District Engineer Madura, and the special Executive Engineer Wellington (under whose orders Mr. Evans had been employed during the periods noted in the margin)† were requested to furnish the Central Office with a special report on the conduct and qualifications (general and professional) of the Overseer, as they may have come under their observation, and the District Engineer Coimbatore, was at the same time, desired to obtain and submit any explanation which Mr. Evans might wish to offer on the charges preferred against him.

† Wellington, from January to August 1860.
Madura, from September 1860, to March 1861.

6. In pursuance of this order Captain Paxton, the late Acting District Engineer Madura, and Captain Farewell, the special Executive Engineer Wellington, reported as follows :—

*Acting District Engineer Madura.*— Tolerably regular in the submission of his accounts, unable to get much work done, deficient in energy and activity, faculties not very good, owing more or less to drinking. Was *believed* to be acquainted with surveying, estimate-making and accounts.

*Late Special Executive Engineer Wellington.*— Superannuated, useless man, quite unfit for the duties required of him, suffered much from ill health, believed to be aggravated by intemperate habits; was never seen the worse for liquor when *on duty*, but subsequent to his departure from the District, it was reported that he drank very hard after working hours.

7. With reference to the charges preferred against him by the District Engineer Coimbatore, Mr. Evans urges that the duty of preparing the sketch alluded to in paragraph 3 was imposed upon him by Mr. Sub-Engineer Lowry, when he was suffering from

fever and sunstroke, and that therefore it would not be just to arrive at any opinion in regard to his qualifications under such circumstances. Mr. Evans denies the charge of intemperate habits, and urges that consequent on the loss of his son in January last and constant travelling, he has suffered much in mind, and has of late become very nervous. He, moreover, states that he has not been allowed a fair trial in the Coimbatore District, having, during the short time he has been there, been employed from the 12th May to 11th June (or only one month) in the Collegal Range, and subsequently in Coimbatore. While employed in the Collegal Range he reports that he inspected the whole of the irrigation works, prepared estimates for all the repairs required, and submitted estimates for urgent works. With regard to his accounts Mr. Evans states that no fault was found therewith, either in the Godavery or Madura Districts, and as respects his qualifications as an Overseer, he brings to notice that since 1834, he has been employed on various projects, and has always done his duty to the satisfaction of the whole of the Officers (those in Coimbatore excepted) under whom he has been employed.

8. As the reports received from the late Acting District Engineer Madura and the late special Executive Engineer Wellington were corroborative of the opinion expressed by the District Engineer Coimbatore, that Mr. Evans was addicted to intemperate habits, I considered it advisable to communicate with the Civil Surgeon at Coimbatore (on whose Certificate Mr. Evans had been granted leave of absence for three months from the 1st August last), with a view of obtaining his opinion as to whether the Overseer's illness was the result in any way of intemperate habits, and whether he was fitted for further service in the Department.

9. In reply to this reference, the Civil Surgeon reports that as Mr. Evans had been under his treatment for only three days prior to his granting him the Medical Certificate in August last, he had no opportunity at that time of judging of his habits, but that he did not appear then to be a man addicted to intemperance. Since August, Doctor Renton states, that he has seen Mr. Evans only once, and that then " he certainly appeared to be suffering from indulgence in intoxicating liquors." Doctor Renton's opinion is that Mr. Evans is unfit for much active service.

10. From the foregoing reports, I consider that it has been proved beyond a doubt that Mr. Evans is quite unequal to the duties required of him in this Department, and that his unfitness has to some extent been caused by intemperance. Under such circumstances the Overseer's Covenant, copy of which is herewith forwarded, provides that in the event of his dismissal he should pay a sum equal to one year's salary or Rupees 3,000. Considering, however, his advanced age, and his good conduct while employed in the Godavery District, I would beg to recommend that authority may be granted to dispense with the services of the Overseer on the charges preferred against him by the District Engineer Coimbatore, without enforcing the penalty just alluded to.

11. I would in conclusion observe that there is at present a demand of Rupees 570 against Mr. Covenanted Overseer Evans on account of payments made to his daughter in Dublin, for which he has omitted to make corresponding payments in this country. The District Engineer Coimbatore has been requested to recover the amount at once from Mr. Evans, but should he be unable to do so I will address Government further on the subject.

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No. 323. Endorsement of the Chief Engineer, dated Chepauk, 14th November 1861, No. 7,179:—

From Captain JOHN GODDARD, District Engineer of Coimbatore, to Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Coimbatore, 4th November 1861, No. 351.

SIR,

1. Adverting to Notification published at page 470, of the Fort Saint George Gazette, dated 8th October 1861, I have the honor to report that Mr. Covenanted Overseer Evans' leave expired on 31st October 1861.

2. Mr. Evans came to me with an application for an extension a few days ago, when I immediately referred him to the Zillah Surgeon, but the Zillah Surgeon has informed me non-officially that he really cannot furnish any case or certificate to Mr. Evans, as he has not received treatment during the period of his absence on leave on Medical Certificate, nor did he avail himself of the permission given him to visit Ootacamund.

3. I certainly cannot conscientiously employ Mr. Evans.* It would be a mere absurdity. He ought to be sent Home, for he will lose his life here I fear.

* *Vide* my letter, No. 212, dated 10th August 1861, reporting Mr. Evans to be an incubus, &c., and letters from Captains Farewell and Ryves.

4. I have the honor to request the early orders of the Chief Engineer upon this matter.

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Submitted for the information of Government, with reference to the Chief Engineer's letter No. 6,972, dated 8th instant.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 324. ORDER THEREON, 26th November 1861, No. 2,181.

Resolved that the opinion of the Law Officers of Government be taken as to whether, under the circumstances stated, Mr. Evans can be summarily discharged. A copy of Mr. Evans' Covenant will be forwarded to the Law Officers.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 325. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th November 1861, No. 7,318 :—

SIR,

1. I have the honor to forward a plan and estimate amounting to Rupees 1,160, for restoring the Mattí Nárreddy Tank in the Cuddapah District.

1 Letter from the District Engineer Cuddapah, No. 461, dated 4th October 1861.
1 Estimate.
1 Plan.
1 Report.
1 Revenue statement.

2. The tank in question is stated to have formerly belonged to Dasvandamdárs, and was breached about 12 years ago, but owing to the refusal of the owners to repair it, the Collector of the District resumed it in 1859.

Rupees 1,160. 3. The accompanying estimate was prepared by the District Engineer at the request of the Acting Sub-Collector, who strongly recommends its execution, and calculates upon a revenue of Rupees 314 after the fourth and subsequent years if the proposed repairs are executed.

4. Under these circumstances, I beg to request that the estimate which has undergone the usual examination in this Office, and which the Collector has countersigned in token of his approval, may be sanctioned for entry in the Budget of 1862-63.

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No. 326. ORDER THEREON, 26th November 1861, No. 2,182.

Sanctioned accordingly.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 327. Read the following Extract from the Proceedings of the Right Honorable the Governor General of India in Council, dated Public Works Department, Fort William, 21st September 1861, Circular No. 85 of 1861 :—

Read the following correspondence regarding the Local Funds at the disposal of the Road and Ferry Fund Committees in the various Provinces subordinate to the Government of India.

P. W. D. Circular Nos. 4,500—13, dated 3rd September 1858.

| | | | | |
|---|---|---|---|---|
| From Government Bengal, | | No. 1,395, | dated | 13th April 1859. |
| To | Do. | " 4,936, | " | 19th July " |
| From | Do. | " 4,178, | " | 6th October 1860. |
| From Government N. W. P. | | " 1,834, | " | 15th December 1858. |
| To | Do. | " 3,983, | " | 8th August 1860. |
| From | Do. | " 3,033 A, | " | 27th November 1860. |
| To | Do. | " 2,027, | " | 11th June 1861. |
| From Chief Commr. Punjab, | | " 10—43, | " | 8th January 1859. |
| To Government Punjab, | | " 3,985, | " | 8th August 1860. |
| From | Do. | " 371—1,632, | " | 5th September 1860. |
| From Chief Commr., Oudh, | | " 13, | " | 13th January 1859. |
| To Foreign Department, | | " 4,572, | " | 20th September 1858. |
| From | Do. | " 97, | " | 14th January 1859. |
| From | Do. Office Memo., | " 3,674, | " | 8th July 1861, forwarding correspondence with Nagpoor. |

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Resolution.—The Circular of 3rd September 1858 was issued in conformity with instructions from the Court of Directors, who were desirous of obtaining precise information regarding the sources, amount, and disposal of Local Funds under the control of Local Road and Ferry Fund Committees.

2. Replies have been received from Local Governments, either direct or through the Foreign Department. But the information in some cases was at the time incomplete, being apparently confined literally to the funds at the disposal of District Committees, and did not relate to the whole of the Local Funds in each Province available for Public Works, whether under Local Committees or Civil or other Officers ; and, moreover, much of the information, even though full and accurate at the time, has now become obsolete.

3. The Report from Bengal related solely to the funds derived from the Ferries and Tolls on District Roads, and the Tolls on the Calcutta Canals and the Nuddea Rivers. The net amounts realized in one year in each District by Ferries and the District Roads Tolls are formed into a "Local Fund," and the amount made available from Navigation Tolls and last year's balances, if any, into a "General Fund" for expenditure in the succeeding year. Where the amount of the Local Fund realized in a District is in excess of its wants, the surplus is credited to the General Fund, and if the amount falls short of its necessary expenditure, a grant is made from the General Fund. The resulting amount of the latter fund is then available for the construction of Railway Feeders and other communications so much needed in Bengal. The whole amount under these two heads available for local road-works under the control of the Lieutenant Governor is termed the "Amalgamated District Road Fund."

4. The figured Statements which accompanied the Bengal Report showed that the aggregate net receipts from Ferries and from Navigation Tolls for the five years from 1854-55 to 1858-59 gave an average annual income of $5\frac{1}{4}$ lacs.* It was added that the Tolls on District Roads and the profits of Jail Manufactures would thenceforward be carried to the same fund.

* Navigation Tolls... Rupees 2,57,612
Ferry Collections.. " 2,68,139

5. It is learnt from the very clear Report, lately received, on works carried out from the Amalgamated Road Fund in Bengal in 1860-61, that the whole sum available in that year, including unexpended balances of 1859-60, was Rupees 13,13,599, viz. :—

| | | RS. | |
|---|---|---|---|
| | LOCAL FUND. | | |
| 1. | Net Ferry Collections ... ... ... ... ... ... | 3,11,875 | |
| 2. | Tolls on District Roads... ... ... ... ... | 4,797 | |
| 3. | Convict Labour Fund ... ... ... ... ... | 3,00,017 | |
| 4. | Cattle Trespass Fund ... ... ... ... ... | 1,19,815 | |
| 5. | Shahabad Road Cess ... ... ... ... ... | 34,441 | |
| 6. | Previous year's balance... ... ... ... ... | 2,18,185 | |
| | | | 9,89,130 |
| | GENERAL FUND. | | |
| 1. | Navigation Tolls ... ... ... ... ... ... | 1,78,103 | |
| 2. | Balances in hands of Magistrates ... ... ... | 1,00,078 | |
| 3. | Undistributed balance ... ... ... ... ... | 46,288 | |
| | | | 3,24,469 |
| | | Total... | 13,13,599 |

6. The Cattle Trespass Fund is made up of fines levied on owners of cattle trespassing and doing damage, and the unclaimed proceeds from the sale of unclaimed cattle, which are available for Public Works under Act V. of 1860.

7. The Shahabad Road Cess is a one per cent. rate similar to that in the N. W. P. Advantage will probably be taken of the renewal of the settlement in Cuttack and other districts not permanently settled, to levy the same tax elsewhere.

8. The other heads of income are self-explanatory.

9. This Amalgamated Road Fund does not however represent the whole of the funds available as local for expenditure under the control of the Lieutenant Governor, and no complete Statement on this subject has been received. But it is to be observed that the item of Rupees 1,78,103, transferred from the surplus receipts of the Navigation Tolls to the General Road Fund is only so transferred after an amount, (estimated in the Budget of the current year at Rupees 6,72,625) has been devoted from that source, from the Suburban Road Funds, &c., to the Executive and Collecting Establishment on the navigation channels and the other works named, to repairs and clearances, ordinary and extraordinary, and to other works in direct extension of navigation in Lower Bengal; all *this* being carried out under Officers of the regular Public Works Department.

10. This expenditure as exhibited in the Budget for the current year may be classified as follows:—

| | RS. |
|---|---|
| Establishment and contingencies... ... ... ... ... ... ... ... .. | 1,10,250 |
| New Toll Houses, Ware-houses, and other accommodation in connexion with Calcutta and Eastern Canals... ... ... ... ... | 24,621 |
| Deepening Tolly's Nulla, tow-paths, and foot-bridge ... ... ... | 1,28,393 |
| Three new cuts to improve navigation of Matabanga ... ... ... | 58,758 |
| Three new cuts on Eastern Canals ... ... ... ... ... ... | 50,000 |
| Constructing Ooloobaria Canal... ... ... ... ... ... ... | 50,000 |
| For minor works... ... ... ... ... ... ... ... ... ... ... | 50,000 |
| Repairs... ... ... ... ... ... ... ... ... ... ... ... ... ... | 2,38,000 |
| Total...... | 7,10,022 |

11. The same Budget shows also an expenditure of Rupees 40,000 from the Port Fund of Akyab and Rupees 5,000 from the Port Fund of Balasore, respecting which there is no other information before this Government.

12. The total expenditure from Local Funds in Bengal this year will therefore, on the assumption that the sum available from the Amalgamated Fund is nearly the same as last year (which is however quite uncertain,) amount to about 20½ lakhs. In this however is included a considerable amount (about Rupees 3,80,000) for ordinary maintenance of the communications, which are the source of a large part of the revenue, and about Rupees 2,60,000 for extraordinary improvements to those communications, so that the actual amount free for local expenditure will be on the above assumption about 14 lakhs.

13. The Returns from the N. W. P. are apparently incomplete. They include Ferries, Tolls on Roads, and the one per cent. Fund only, which gave in 1854-55, 1855-56, 1856-57 an average income of Rupees 8,69,302.* In the Budget of 1861-62 the income of the Local Fund is estimated as follows:—

| | Rs. |
|---|---|
| Road Fund | 5,65,159 |
| Ferry ,, | 3,00,688 |
| Surplus Chowkidaree | 4,348 |
| Town Duties | 53,202 |
| Nuzool Fund | 51,689 |
| Sayer ,, | 8,262 |
| Municipal ,, | 48,990 |
| Pound Collections | 11,377 |
| Chowkidaree Fund | 65,639 |
| Convict Labour Fund | 11,532 |
| Total...... | 11,20,886 |

* Ferries .. .. .. Rs. 2,68,320
Tolls on Roads.. ... ,, 60,023
One per cent. Fund ... ,, 5,40,959
Total.... 8,69,302

14. This appears to be comprehensive, but there may possibly be some omissions. It is not clear under which of the above heads would appear "Maugh Mela Collections," from which, it was observed in a late Abstract Proceedings, a grant was made for the construction of a road Nor is it understood that grants from the Ábkári Fund are included, though it is believed that such are made in aid of local works, as at Mussooree.

15. The figured Returns from the Punjab are unreliable. They include, as representing the average annual income—

| | Rs. |
|---|---|
| Ferry Fund | 2,38,678 |
| Road ,, | 1,92,793 |
| Total...... | 4,31,471 |

But this is but a small part of the income of the Local Funds. The Annual Report on Local Public Works for 1859-60 states it to have been in—

| | Rs. |
|---|---|
| 1858-59 | 12,78,699 |
| 1859-60 | 14,03,612 |

while on the 1st May 1860 there was a balance in hand of 18¼ lakhs.

Ordered, that the foregoing remarks be forwarded to all Local Governments and Administrations for information, with a request that the desired information may be submitted in a complete form with the Budget of 1862-63.

(True Extract.)

(Signed) H. YULE, Lieut.-Colonel,
*Secretary to the Government of India.*

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No. 328. ORDER THEREON, 27th November 1861, No. 2,183.

1. The above Circular will be communicated to the Chief Engineer, who will, with his next Budget, furnish the information required in paragraph 32. This he has already been desired to do in paragraph 8 of Government Order, 23rd May 1861, No. 981.

2. It is observed that in paragraph 27, the Supreme Government while disclaiming all wish or intention to interfere in any way with the control of the local administrations over local funds, desire full information regarding them as a guide in allotting money for Public Works from the Imperial Revenues. In paragraph 5 of the Proceedings of the Supreme Government, dated 27th April 1861, No. 1,322, Public Works Department, the receipts from local funds were treated as part of the Imperial expenditure available for Public Works. The following abstract shows the Public Works Budgets of the four principal administrations, *plus* the local funds. It is prepared from paragraphs 2 and 25 of the Proceedings of the Supreme Government, above quoted—

| | Budget Sanction. | Local Fund. | Total. | |
|---|---|---|---|---|
| Madras | 64 | 3 | 67 | Lacs. |
| Bengal | 52 | 21 | 73 | ,, |
| North West Provinces | 63 | 11 | 74 | ,, |
| Punjab | 52 | 13 | 65 | ,, |

3. It thus appears that while the Madras Budget was apparently the largest, it really was considerably less than that either of Bengal or of the North West Provinces and just the same as that of the Punjab, if the two lacs devoted to the Upper Godavery works beyond the Madras frontier be excluded, as for such a comparison they should be from the Madras Budget. No comparison can be instituted with Bombay as the amount of its local funds is not given in the Proceedings of the Supreme Government.

4. An examination of the items in the Bengal Circular, shows that several items are in the other Presidencies treated as local funds which in Madras are credited to the State.

5. Thus in Bengal there is an item "Convict Labor Fund" producing three lacs. In this Presidency, receipts from this source are not included in the local fund, they are considered, and properly, as public revenue in the Judicial Department. "Navigation Tolls" and "Ferry Collections" add $5\frac{1}{4}$ lacs annually to the Bengal Local Fund, while that of Madras gets credit only for Tolls at Ferries on minor roads; those at Ferries on Imperial roads (*i. e.* roads made and maintained out of Imperial Funds), and those on navigable canals are all credited to the general revenue.

6. In the North West again, "Convict Labor Fund" and "Town Duties," "Chowkidary Fund," appear among the local fund items, and contributions are also occasionally made from the Ábkári revenue.

7. In the Punjab "Local Agency," "Prison Labor" and "Municipal" add nearly nine lacs to the local fund.

8. In Bombay the Forest Revenue is entered as local fund.

9. It is very desirable, as local funds are to influence the Budget allotments, that this Government should have the means of comparing the sources of their local funds with those of the similar funds in other Presidencies, and application will accordingly be made to the Supreme Government. At the same time a copy of the Report of the Revenue Board on the administration of the local fund in 1859-60, will be forwarded to the Supreme Government, who will find all the information they can require in it and its figured statements.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 329. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th November 1861, No. 7,319:—

SIR,

In reply to paragraph 2 of the Proceedings of Government No. 2,055, dated 7th instant, I have the honor to report for the information of Government that the eastern portion of the lower story of the Dewan Khana can be made available for the accommodation of the Consulting Engineer for the Irrigation and Canal Company and his Office, as soon as the upper story partitions are ready.

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No. 330. ORDER THEREON, 27th November 1861, No. 2,184.

Communicated to the Consulting Engineer to the Irrigation Company, who will arrange accordingly.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 331. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 5th November 1861, No. 6,882:—

SIR,

Referring to the Proceedings of Government, No. 2,006, dated 30th October 1861, I have the honor to solicit the attention of Government to paragraph 4 of my Endorsement dated 4th October 1861, No. 5,581, and to request that authority may be granted for writing off to "Profit and Loss" the sum of Rupees 1,828-1-6 therein referred to, as the claims of Government to that amount have been already enquired into by Deputy Collector Ramaiyangar and the District Engineer.

16. The sources from which this revenue is derived are the following, as abstracted from the Report above alluded to—

| | RS. |
|---|---|
| Ferry Fund... | 2,84,671 |
| Road ,, ... | 2,33,205 |
| Local Agency | 2,11,003 |
| Prison labour | 66,918 |
| Municipal | 6,07,080 |
| Other sources | 735 |
| Total...... | 14,03,612 |

17. It is not understood what is meant by 'Local Agency.' It is observed that the income at Simla is put down *nil*. It is presumed that it is disposed of by the Municipal Commissioners. But the amount should be included, and all sums similarly appropriated.

18. It should be added that in 1859-60 Rupees 3,35,795 was spent on Establishments, from which fact it is concluded that the above items give, in some cases at least, the *gross* income. This should be explained. All that this Department has to do with these funds is confined to the *net amount available for Public Works,* and this should be entered as the income of the funds.

19. The Chief Commissioner of Oudh replied to the Circular from this Department, that no Returns of Local Funds existed. No Return of them was made in submitting the Budget for the present year, and in passing orders on it, the omission was noticed, and the attention of the Chief Commissioner drawn to it.

20. It appears from the Administration Report of 1859-60 that the following income was realized:—

| | RS. |
|---|---|
| From Road Fund... | 2,15,725 |
| ,, Ferry ,, | 1,10,015 |
| Total... | 3,25,740 |

No particulars are known here of other funds that are available for local works, though certainly considerable sums have been so available in Lucknow from forfeited property and the like.

21. The Commissioner of Pegu stated that the average annual receipts from Ferry Collections amounted to Rupees 1,510. Later information should be obtained. The Local Budget for this year proposed an expenditure of Rupees 25,000.

22. The only Local Fund in Mysore was said to be derived from a Boat Tax, which yielded Rupees 3,095 a year. But it is credited to the General Revenues.

23. The Commissioner of the Tenasserim and Martaban Provinces stated that there were no Local Funds at the disposal of Ferry Fund Committees. It is presumed that this meant that there were no Local Funds available for Public Works.

24. The Returns from the Hyderabad Assigned Districts showed an income of Rupees 70,076, probably *gross* income is meant.

It included—

| | RS. |
|---|---|
| Ferries... | 3,909 |
| Town Fund | 28,214 |
| One per cent. Fund... | 19,604 |
| Police Tax and Town Duty Tax...... | 16,313 |
| Sale of unclaimed property... | 2,036 |
| Total... | 70,076 |

25. No reference is made to this income in the Budget for the current year. It is observed from the Report of the late Commission in the Military Finance Department, that there is at the credit of the Local Funds of the Assigned Districts an accumulation of half a lakh of Rupees.

26. The late Commissioner of Nagpoor replied that there was both a one per cent. Fund and a Ferry Fund, but gave no details of any kind. It has been learnt, however, from a late correspondence between the Commissioner and the Government of India in the Foreign Department, that other funds, Municipal, Nuzool, and others, will shortly be available for Local Public Works, if they are not already established. Information on this point should be obtained.

27. From the foregoing sketch it is evident that the information at present before the Government of India is very defective. It is not the wish or the intention of the Governor General in Council to interfere in any way with the control exercised by the Heads of Local Administrations over these funds, but it is requisite that information in some degree approaching accuracy should be supplied for submission to Her Majesty's Government, and for the guidance of the Government of India in allotting money for Public Works from the Imperial Revenues.

28. The Circular above quoted was not sent to Madras and Bombay.

29. In the Madras Budget for 1861-62 the expenditure from Local Funds was stated as follows :—

| | RS. |
|---|---|
| Educational Funds... ... ... ... ... ... ... | 84,678 |
| Port Funds ... ... ... ... ... ... ... | 8,044 |
| District Miscellaneous ... ... ... ... ... ... | 2,17,205 |
| Total... | 3,09,927 |

30. It was remarked in the Budget Orders that some brief explanation would be desirable of the sources of the first and third of these items. It is presumed that the last are the Local Funds referred to in paragraph 33 of the Administration Report for 1859-60. If so, there is an absence there, too, of the desired information. It has been observed that the Government of Madras was in communication with the Bombay Government early in this year on the subject of making Forest receipts available for Local Public Works.

31. The Bombay Government included in the Budget Estimate as local receipts $3\frac{1}{2}$ lakhs, viz., 2 lakhs expected to be realized by the Ferry and Toll Funds, and $1\frac{1}{2}$ lakhs by the Forest Department. As it was represented by the Financial Department that these were included in the Imperial receipts, and as no separate proposition was made for the expenditure, the amount was dealt with as part and parcel of the Budget allotment.

32. The foregoing remarks should be forwarded to Bombay and Madras, as well as to the Local Administrations immediately subordinate to the Government of India, for general information, and with a view to obtaining with the next Budget a clear account of all sources of revenue available for Local Public Works, and the amount realized from each in each Province or Division. This will form the material for a full report to Her Majesty's Government.

No. 332. ORDER THEREON, 27th November 1861, No. 2,185.

The Government grant authority for writing off Rupees 1,828-1-6, in the Public Works Accounts of the Tanjore District.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 333. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 15th November 1861, No. 7,225 :—

SIR,

With reference to the Proceedings of Government, dated 20th July 1861, No. 1,443, I have the honor to submit for orders the accompanying letter from the District Engineer of North Arcot, recommending that the *Palkonda* Range should in future be designated the *Vellore* Range, to assimilate it with that of the Táluq, which has been changed to Vellore under the orders above quoted, and to request that the same may be sanctioned.

1 Letter, dated 4th November 1861, No. 888.

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No. 334. ORDER THEREON, 27th November 1861, No. 2,186.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 335. Read the following letter from Lieutenant-Colonel A. J. M. BOILEAU, Government Superintendent and Controller, Pier Works, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 14th November 1861 :—

SIR,

1. In my Memorandum dated 6th September 1861, embodied in the Proceedings of Government No. 1,879, dated 10th October 1861, I stated that owing to the want of the 95th and 96th Rows the Pier work could not be resumed till after the arrival of the "Osborne" the "St. Oswin" I should have said).

2. The Agent to the Pier Contractor having, however, pointed out to me that two rows of the Piles brought out by the "Daybreak" for the Pier Head, are quite suitable for use in the 95th and 96th rows, the proper Piles for which rows, again, may on their arrival, be without any difficulty used in the Pier head, and having solicited permission to proceed with the work, I have authorized him to do so, having first satisfied myself that the re-arrangement of the Piles as proposed by him will in no way interfere with, but on the contrary, will only accelerate the due and proper execution of the work according to the Drawings.

3. The work was accordingly resumed this morning by commencing the screwing in of the 95th row.

No. 336. ORDER THEREON, 27th November 1861, No. 2,187.

Approved.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 337. Read the following Endorsement of the Chief Engineer, dated Chepauk, 14th November 1861, No. 7,173.

Read the following letter from Captain H. L. PRENDERGAST, District Engineer of North Arcot, to Lieutenant-Colonel A. J. M. BOILEAU, Deputy Chief Engineer, Central Circle, dated Arcot, 10th October 1861, No. 753.—

SIR,

1. In my letter No. 703 of the 28th ultimo, I requested that item No. 161 of Budget list No. 2 of the current year, might be cancelled, being Rupees 3,000 for constructing the road from Putur to Pullipett, as this road has been made out of the local funds; at the same time, I alluded to my previous letter No. 230 of the 21st June 1861, in which I stated that an estimate would be furnished for the annual maintenance of this road, out of Government funds, and I have now the honor to submit an estimate amounting to Rupees 525, at the rate of Rupees 50 a mile, together with a Return of the present traffic, which is shown to be on an average 108 carts in the day. I would request that this estimate may be included in the Budget for the next official year 1862-63.

2. Sub-Engineer Chedumbra Mudaliar states that since the road has been laid out, the traffic has been gradually setting in, and gives his opinion that by the end of the year, it will have become considerably increased.

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1 Estimate for maintenance allowance.
1 Traffic Return.
1 Letter from the District Engineer North Arcot, No. 753, dated 10th October 1861.

1. Submitted to Government with reference to the Endorsement on the District Engineer's letter No. 230, dated 21st June 1861, with the Chief Engineer's recommendation that the maintenance allowance therein applied for, viz., Rupees 525 for $10\frac{1}{2}$ miles of road from Putur to Pullipett, at the rate of 50 Rupees per mile, may be sanctioned for entry in the Budget of 1862-63.

2. A statement of traffic accompanies the foregoing letter.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 338. ORDER THEREON, 27th November 1861, No. 2,188.

The Governor in Council does not see why as this road was made with local funds, it should not also be maintained by a grant from the same source.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 339. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 18th November 1861, No. 7,320:—

SIR,

1 Letter from the District Engineer North Arcot, No. 702, dated 28th September 1861.
1 Do. No. 537, dated 24th August 1861.

1. I have the honor to forward herewith the letters as per margin, from the District Engineer of North Arcot, recommending the grant of an allowance in the current official year for preserving work executed, at a cost of Rupees 5,000 on the line of road between Arcot and Arnee, sanctioned for construction on an estimate Rupees 32,600 in the Proceedings of Government, No. 1,617, dated 30th July 1860, but stopped under the further orders conveyed in Proceedings No. 214, dated 31st January 1861.

2. The District Engineer states that he was enabled during last year to expend the above sum, Rupees 5,000, in tracing the line of road, throwing up embankments over marshy places, and gravelling portions of the roadway below tanks. The roadway was thus rendered generally easy for the passage of laden carts, and since this improvement was effected, the traffic has considerably increased. The amount now applied for is to prevent the road, so far as already made from deteriorating, by providing for the repairs of injuries as soon as they occur.

3. On this point the District Engineer remarks : " With the examples I have had before " me of roads being materially injured, by being left untouched from the restriction of " expenditure, such as the road between Vellore and Arnee, and from Palmanair to Venketagherri " Kotta, I consider the expenditure of the money now applied for, will be a positive saving to " Government."

Rupees 800.

3,550 for Peruncanjee Channel.
5,100 for Malapady Channels.
8,650

4. The saving of Rupees 8,650 from which Captain Prendergast proposes in paragraph 3 of his letter, herewith forwarded, to defray the sum is not now available, as it has been diverted to other objects, as per margin, but I beg to recommend that the sum, viz., Rupees 800 (that is 50 Rupees a mile on 16 miles) may be granted out of the general funds at that Officer's disposal.

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No. 340. ORDER THEREON, 27th November 1861, No. 2,189.

Sanctioned.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 341. Read the following Endorsement of the Chief Engineer, dated Chepauk, 4th November 1861, No. 6,818.

Read the following letter from Major J. F. STODDARD, Acting District Engineer Godavery District, to Lieutenant-Colonel F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Dowlaishwaram, 19th October 1861, No. 868 :—

SIR,

* No. 1,268, dated 5th June 1861.
No. 5,713, „ 8th Oct. „

With reference to Extracts from Proceedings* of Chief Engineer, marginally noted, I have the honor to forward an original letter

from Mr. Moncrieff, Superintendent of Government Workshop, No. 393, dated 17th instant, and request to be favored with instructions regarding the rejected anchors and chains, &c.

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From F. L. MONCRIEFF, Esq., Superintendent Government Workshops, Dowlaishwaram, to Major J. F. STODDARD, District Engineer Godavery, dated Dowlaishwaram, 17th October 1861, No. 393.

SIR,

1. With reference to your letter No. 837 of the 15th instant, I have the honor to inform you that I have ordered chain cables and anchors for all of Blythe's Sea Tugs, and that I have been informed by Messrs. Oakes & Co. Madras, that they shipped all required to complete the Steamers, on board the "Moulmein" on the 2nd instant.

2. One of these Steamers, the "Fred and May," had a new chain, anchor, and windlass placed on board before she left the Workshop for Cocanada in July.

3. The remaining Tugs "Frank and Ada" and "Godavery" will be fitted with new windlass here as soon as the pressure of work is over, preparing the "Flotilla" for the use of the Governor General.

4. With reference to the last paragraph of your letter, I would suggest that the rejected anchors and chains be sold after the Tugs are re-furnished and the amount received by the sale deducted from the value of the new anchors, chain, &c., or if Messrs. Blythe have to pay for them, that the amount may be made over to their Agents.

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1 Letter from District Engineer Godavery, No. 868, dated 19th October 1861.
1 Do. from Mr. Moncrieff, No. 393, dated 17th „ „
† No. 982, dated 23rd May 1861.
No 1,821, „ 2nd Oct. „

Submitted to Government with reference to their Proceedings noted in the margin,† and with a request that the sale of the articles by auction or private contract may be sanctioned and the amount placed in the suspense account, until it is determined whether Messrs. Blythe & Co., are to be made responsible for expense entailed by the purchase of new anchors, chains, &c.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 342. ORDER THEREON, 27th November 1861, No. 2,190.

Sanctioned accordingly. The sum realized by the sale of the rejected articles, and the cost incurred on account of the new ones, should be duly reported for communication to the Secretary of State.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 343. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, Public Works Department, dated Chepauk, 30th September 1861, No. 5,441:—

SIR,

Public.

I have the honor to submit for the information of Government the following Report of the operations of the Public Works Department for the Official year 1860-61, in the preparation of which the instructions conveyed in paragraphs 8 and 9 of the Proceedings of Government, dated 30th April 1861, No. 881, have been attended to.

*Vide* Proceedings of Government, dated 11th May 1860, No. 186.
Do. do. dated 28th July 1860, No. 1608.
Do. do. dated 13th September 1860, No. 1913.
*Vide* Proceedings of Government, dated 30th November 1860, No. 2670.

2. The amount of expenditure provided in the Budget was Rupees 75 lacs, inclusive of the cost of Establishments computed at 17 lacs; but under the orders of the Supreme Government this was afterwards reduced by 13 lacs,—1st by the stoppage of such works as admitted of postponement,—2nd, by the reduction of the amount allotted for expenditure on others,—and 3rdly, by a reduction of 18 per cent. from the sum sanctioned for repairs, so as to bring the aggregate outlay to within 62 lacs Subsequently, however, the Government of India authorized an additional sum of 3 lacs of Rupees for carrying on the operations at the Upper Godavery, which increased the amount placed at the disposal of the Department for expenditure during the past year to 65 lacs.

| | | | | | | |
|---|---|---|---|---|---|---|
| Proceedings of Government, | | dated | 20th November 1860, | | No. | 2388. |
| Do. | do. | ,, | 21st December | ,, | ,, | 4606. |
| Do. | do. | ,, | 24th do. | ,, | ,, | 2648. |
| Do. | do. | ,, | 28th January 1861, | | ,, | 180. |
| Do. | do. | ,, | 9th February | ,, | ,, | 271. |
| Do. | do. | ,, | 9th do. | ,, | ,, | 272. |
| Do. | do. | ,, | 9th do. | ,, | ,, | 273. |
| Do. | do. | ,, | 14th do. | ,, | ,, | 305. |
| Do. | do. | ,, | 28th do. | ,, | ,, | 497. |
| Do. | do. | ,, | 28th do. | ,, | ,, | 492. |
| Do. | do. | ,, | 12th March | ,, | ,, | 504. |
| Do. | do. | ,, | 15th do. | ,, | ,, | 526. |
| Do. | do. | ,, | 26th do. | ,, | ,, | 606. |
| Do. | do. | ,, | 26th do. | ,, | ,, | 609. |
| Do. | do. | ,, | 24th April | ,, | ,, | 824. |
| Do. | do. | ,, | 12th do. | ,, | ,, | 741. |

3. Several changes were made in the distribution of these funds to each District. In November 1860, a total revision was sanctioned consequent on the sum allotted for repairs having been reduced to admit of a larger outlay on new works; and subsequently other revisions were made under the Orders of Government, marginally noted, with a view to the whole of the funds being turned to the best advantage. In some cases, however, the intimation given by District Engineers, of balances available for transfer to other Districts was too late to admit of their being made use of.

4. The following Abstract Statement contains the final allotment to each District, and the total expenditure under the same. In some Districts, as per margin,* the limit assigned for New Works has under paragraph 9 of the Proceedings of Government, dated 13th September 1860, No. 1,913, been exceeded, and such has been the case as regards repairs in other Districts† ; but only in one instance‡ has the whole allotment for new works and repairs been exceeded to any extent.

*Godavery, Cuddapah, Bellary, Kurnool. South Arcot, South Canara, Presidency.

†Madras, Salem, North Canara. Bangalore. Wellington.

‡Presidency.

| Districts. | Allotment. | | | Expenditure. | | |
|---|---|---|---|---|---|---|
| | New Works. | Repairs. | Total. | New Works. | Repairs. | Total. |
| Ganjam | 39,468 | 54,259 | 93,727 | 38,681 | 53,461 | 92,142 |
| Vizagapatam | 31,384 | 27,817 | 59,201 | 20,859 | 26,517 | 47,376 |
| Upper Godavery | 3,00,491 | ,, | 3,00,491 | 77,976 | ,, | 77,976 |
| Godavery | 55,319 | 2,63,781 | 3,19,100 | 1,03,129 | 2,13,237 | 3,16.366 |
| Kistna | 1,57,091 | 1,52185 | 3,09,276 | 1,39,291 | 1,15,118 | 2,54,409 |
| Nellore | 1,34,327 | 2,10,846 | 3,45,173 | 1,23,356 | 1,97,574 | 3,20,930 |
| Cuddapah | 45,632 | 1,37.167 | 1,82,799 | 63,159 | 1,18,853 | 1,82,012 |
| Bellary | 1,22,898 | 1,37,838 | 2,60,736 | 1,03,712 | 1,27,967 | 2,31,679 |
| Kurnool | 31,809 | 48,362 | 80,171 | 39,077 | 4,1747 | 80,824 |
| Madras | 79,265 | 1,69,223 | 2,48,488 | 63,049 | 1,76,573 | 23,9,622 |
| North Arcot | 41,295 | 1,23,440 | 1,64,735 | 40,172 | 1,2,1204 | 1,61,376 |
| South Arcot | 40,562 | 12,0,971 | 1,61,533 | 41,854 | 1,08,630 | 1,50,484 |
| Tanjore | 42,146 | 2,61,174 | 3,03,320 | 28,491 | 2,59,856 | 2,88,347 |
| Trichinopoly | 81,710 | 1,26,793 | 2,08,503 | 54,570 | 1,18,388 | 1,72,958 |
| Madura | 45,142 | 69,763 | 1,14,905 | 28,862 | 50,652 | 79,514 |
| Tinnevelly | 2,748 | 96,111 | 98,859 | 2,088 | 73,225 | 75,313 |
| Coimbatore | 84,813 | 1,12,420 | 1,97,233 | 52,564 | 92,717 | 1,45,281 |
| Salem | 86,748 | 1,03,304 | 1,90,052 | 80,211 | 1,07,128 | 1,87,339 |
| North Canara | 65,422 | 83,109 | 1,48,531 | 41,478 | 84,413 | 1,25,891 |
| South Canara | 5,540 | 35,520 | 41,060 | 13,261 | 23,413 | 36,674 |
| Malabar | 1,58,034 | 33,966 | 1,92,000 | 1,31,439 | 30,026 | 1,61,465 |
| Presidency | 2,89,693 | 1,08,250 | 3,97,943 | 3,41,250 | 74,633 | 4,15,883 |
| Municipal Commissioners | ............ | 24,397 | 24,397 | ,, | 24,397 | 24,397 |
| Bangalore | 1,91,281 | 13,284 | 2,04,565 | 1,68,272 | 15,145 | 1,83,417 |
| Wellington | 1,47,421 | 5,781 | 1,53,202 | 1,46,666 | 6,647 | 1,53,313 |
| Total | 22,80,239 | 25,19,761 | 48,00,000 | 19,43,467 | 22,61,521 | 42,04,988 |

5. From this statement it will be observed that the expenditure on public works during the past year has fallen short of the allotment by Rupees 5,95,012, and is Rupees 686,071 less than the outlay of 1859-60; but if the grant of 3 lacs for the works at the Upper Godavery and the expenditure under it, Rupees 77,485 be excluded from this comparison, as it should be, in consequence of the late date on which the Orders authorizing the same were received, the unexpended balance will be Rupees 3,74,497, or Rupees 91,151 less than the difference* of the preceding year.

Expenditure in 1859-60 ....Rs. 48,91,059
Do. in 1860-61 ,, 42,04,988

*Vide* Proceedings of Government, dated 30th November 1860, No. 2,470.

*Rupees ............ 4,65,648

6. Various reasons are given by the local Officers for the full allotment not having been availed of, the principal of which are the difficulties caused by the prevalence of sickness and the absence of duly qualified persons to fill up vacancies in the subordinate grades, the late date on which sanction for the prosecution of some of the large works was accorded, and the now continually increasing difficulty of procuring labor. In Madura and Tinnevelly, however, the backwardness of work was owing to the estimates for repairs of roads not having been submitted in the first instance, in the prescribed form so that the large sums Rupees 28,762 and Rupees 36,660 allowed in their respective budgets for "roads not provided with special grants" were to a great extent not used.

7. The actual expenditure during the past year on works of every description may be classified as follows,

| | *New Works* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation ... ... ... ... ... ... ... ... | 3,98,940 | 11,26,242 |
| Communications... ... ... ... ... ... ... | 6,35,104 | 8,93,148 |
| Buildings .. ... ... ... ... .. ... ... | 9,09,423 | 2,17,734 |
| Municipal Commissioners... ... ... ... ... ... ... | | 24,397 |
| Total... | 19,43,467 | 22,61,521 |

8. This amount differs from that given in the Administration Report forwarded to the Chief Secretary to Government on the 15th June 1861, owing chiefly to the District Engineer of the Upper Godavery having in his annual report of operations improperly included in the amount of expenditure, the sums disbursed from the Godavery Transit Funds,* and the amount of certain cancelled cheques,† an error which was only discovered on the receipt of the annual Progress Report, and has now been rectified.

* Rupees 2,500.
† Rupees 1,887.

9. The chief outlay on account of the construction and repair of irrigation works has been in the following Districts .—

| | *New Works* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Ganjam.. ... ... ... | 79,53 | ... |
| Godavery... ... ... ... ... | 77,040 | 1,48,738 |
| Kistna... ... ... ... ... | 1,22,532 | 92,072 |
| Nellore... ... ... ... ... ... | 1,06,837 | 1,44,822 |
| Cuddapah... ... .. .. .. ... | | 63701 |
| Bellary... ... .. .. ... ... | | 72179 |
| North Arcot... ... ... | | 64,596 |
| South Arcot.. ... ... ... ... | 31,249 | 55,769 |
| Tanjore... ... ... ... ... | 13,472 | 1,57,478 |
| Trichinopoly... ... ... ... ... | 13,528 | 88,356 |

10. In these Districts some very important works have been in progress, particulars of which are given elsewhere in this report; but it may be proper for me to remark here that the outlay in Tanjore and Trichinopoly during the past year was considerably less than in 1859-60, the repairs of the injuries sustained by the storms of the two preceding years having been completed in that year.

11. The sum spent on Communications were distributed in the following manner,

| | *New Works* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Roads and Bridges.. ... ... ... | 5,08,260 | 8,15,306 |
| Navigable Canals.. ... ... ... ... | 1,02,469 | 66,403 |
| Ports and Harbours.. ... ... ... | 21,917 | 7,792 |
| Ferry Boats... ... ... ... ... | 2,458 | 3,647 |

and the great bulk of the expenditure was on account of Roads and Bridges and Canals in the Districts of

| | *New Works* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Godavery... ... ... ... | 24,060 | 52,084 |
| Upper Godavery... ... ... | 77,976 | ... |
| Nellore... ... ... ... | 11,255 | 51474 |
| Cuddapah... ... ... | 55,122 | 53,804 |
| Madras.. ... ... ... ... ... | 26,557 | 1,09,326 |
| North Arcot... ... ... ... | 34,277 | 47,142 |
| South Arcot... ... ... | 10,555 | 51,220 |
| Tanjore... ... ... ... ... | 14,725 | 86,182 |

| | *New Works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Coimbatore.. ... ... ... ... | 24,263 | 53,067 |
| Salem... ... ... ... ... | 42,283 | 75,714 |
| North Canara ... ... ... ... | 40,419 | 79,675 |
| Malabar.. ... ... .. ... | 99,892 | 17,037 |

12. In the first two Districts the principal outlay was on canals, but in the others it was on Roads and Bridges, excepting in the Madras District, where a large sum was spent on the Eastern Coast Canal.

13. On Buildings the expenditure was under the following heads,

| | *New Works* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Military.. ... ... ... ... | 6,68,174 | 1,02,328 |
| Revenue... ... ... ... ... | 42,918 | 48,563 |
| Public... ... ... ... ... | 125,398 | 34,240 |
| Judicial... ... ... ... ... ... | 59,743 | 20,628 |
| Ecclesiastical... ... ... ... ... | 7,550 | 4,674 |
| Marine... ... ... ... ... ... | 3,366 | 6,625 |
| Educational... ... ... ... .. | 2,274 | 676 |

14. The largest expenditure was on account of Military Buildings, the most important of which were the Hospital and Married Men's Quarters at Bellary, the Dragoon and Artillery Barracks &c., at Bangalore, the European Barracks and Subsidiary works at Wellington, and the improvements to the Fortifications of Fort Saint George and the Infantry Barracks therein.

15. On Revenue and Public Buildings the chief outlay took place at the Presidency, and the sum spent under the head of Judicial Buildings was on account of the Court House and Jail at Salem, and the Jail at Ootacamund, the latter of which works has been carried out under the sole control and superintendence of the Inspector General of Jails.

16. The sum expended on account of Permanent Establishments and Contingencies, amounts to Rupees 16,55,670, or Rupees 20,095 less than it was in 1859-60, and if from this amount there be deducted, in accordance with the views of Government, communicated in paragraph 5 of their Proceedings, dated 12th January 1860, No. 91, the pay of the classes marginally noted, the proportion of the remaining sum, Rupees 15,08,135, to the expenditure on works will be nearly 36 per cent. In some Districts, however, this ratio is, as was the case in 1859-60, considerably less, while in others it is as much higher, as will be seen from the accompanying Statement which has been prepared in the form directed in the orders above quoted; and such will continue to be the result so long as the restriction on expenditure is maintained, for though the Department under its present constitution is fully competent to attend to a greater extent of work than now falls to its charge, yet, considering that the numerous works on which the revenue chiefly depends are scattered over large tracts of country, it could scarcely be curtailed without detriment to its efficiency. In some Districts the number of Subordinates may, for the time, be diminished, but in others additional aid is required, so that no permanent reduction can be effected without rendering the Department unequal to the duties which it is called upon to perform.

| | | |
|---|---|---|
| Covenanted Probationers from England.......... | Rs. | 10,281 |
| Mechanical Engineers.............................. | ,, | 41,154 |
| Freight and landing charges........................ | ,, | 23,877 |
| Conservancy and Channel Establishments......... | ,, | 7,2223 |
| | Rs. | 1,47,535 |

No. 1.

17. In calculating the above proportion, I have not been able to include the amount expended from local funds, as the whole of the returns have not yet been received from the Districts, but it may be roughly stated at Rupees 1,50,000.

18. With respect to the traffic upon the various navigable canals and through the Paumben passage, statements of the same will be found elsewhere under the respective Districts* in which they are situated.

*Godavery.
Kistnah.
Madras.
Madura.

19. The registers of traffic kept at the head locks of the three main canals in the Godavery District show a very great increase in the value of goods passing through them during the past year, compared with that of the preceding year, as will be seen from the following Statement :—

| | Boats. | Tonnage. | Passenger Boats. | Value of Goods. | |
|---|---|---|---|---|---|
| East Main Channel, Dowlaisharum Locks. | 9,610<br>12,794 | 1,44,150<br>1,91,910 | 1,976<br>2,102 | 18,29,560<br>32,73,888 | In 1859-60<br>,, 1860-61 |
| Increase... | 3,184 | 47,760 | 126 | 14,44,328 | |
| Central Main Channel, Bobber Lunka Lock. | 2,514<br>2,825 | 37,710<br>42,375 | 387<br>715 | 4,03,092<br>4,86,713 | In 1859-60<br>,, 1860-61 |
| Increase... | 311 | 4,665 | 328 | 83,621 | |
| Western Main Channel, Vizaishwarum Lock. | 9,272<br>10,723 | 1,39,080<br>1,60,843 | 1,806<br>4,586 | 13,78,408<br>21,05,744 | In 1859-60<br>,, 1860-61 |
| Increase... | 1,451 | 21,763 | 2,780 | 7,27,336 | |

20. This result is highly satisfactory and illustrative of the value set upon these means of cheap locomotion by the people of the District.

21. In the Kistna District the value of the traffic in the Main Canal at Bezoarah on the left bank of the river has been Rupees 42,743 in excess of that of 1859-60, but in that at Seetanagarum on the right bank there has been a falling off during the past year of Rupees 56,101 owing to the navigation having been stopped from the end of September 1860, to the close of the official year by the silting up of the river in front of the Lock.

| | | |
|---|---|---|
| In 1869-60...... | Rs. | 1,17,051 |
| In 1860-61...... | ,, | 1,59,794 |
| | | 42,743 |
| In 1859-60.... | Rs. | 73,114 |
| In 1860-61..... | ,, | 17,013 |
| | | 56,101 |

22. Upon the Eastern Coast Canal the traffic has increased both as regards Salt and miscellaneous produce. In 1859-60 the amount of toll collected was Rupees 31,795-13-0, whilst during the past year it was Rupees 45,199¾, the principal increase being on account of Salt, the demand for which was much in excess of that of the preceding year, probably owing to the extension of the Railway to Salem, by which means, large supplies of this article are forwarded for inland consumption.

23. At the Paumbem passage there has also been an increase in the number and tonnage of the vessels passing through it, and the revenue derived from Pilotage, &c., was Rupees 3,300 in excess of the sum realized during the preceding year, as will be seen from the comparative return given in the report of the operations in the Madura District.

24. The following are Tabular Statements of expenditure upon "New Works" and "Repairs", in the preparation of which I have endeavoured, as much as possible, to assimilate the classification with that of the Synopsis which accompanied the Annual Progress Report submitted for transmission to the Government of India on the 7th September 1861, No. 4,736, and following these Statements will be found the Reports upon the principal operations in each District.

*Expenditure upon New Works during the year 1860-61.*

| Districts. | Communications. | | | | | Buildings. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Irrigation works. | Roads and Bridges. | Navigable Canals. | Ports and Harbours. | Ferry Boats. | Military. | Revenue. | Public. | Judicial. | Ecclesiastical. | Marine. | Educational. | Total. |
| | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Ganjam | 7,953 | 25,506 | ... | ... | 528 | ... | 4,627 | ... | ... | ... | 67 | ... | 38,681 |
| Vizagapatam | 2,698 | 1,299 | ... | 78 | ... | 12,711 | 272 | 278 | 2,184 | 1,059 | 280 | ... | 20,859 |
| Upper Godavery | ... | ... | 77,976 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 77,976 |
| Godavery | 77,040 | ... | 6,988 | 17,072 | ... | 1,012 | ... | 445 | ... | 572 | ... | ... | 1,03,129 |
| Kistna | 1,22,532 | 13,564 | ... | ... | ... | ... | 284 | 2,757 | 154 | ... | ... | ... | 1,39,291 |
| Nellore | 1,06,837 | 11,255 | ... | ... | ... | ... | 149 | 3,417 | 1,461 | ... | 237 | ... | 1,23,356 |
| Cuddapah | 3,917 | 55,122 | ... | ... | ... | ... | 1,094 | 3,026 | ... | ... | ... | ... | 63,159 |
| Bellary | 120 | 59 | ... | ... | ... | 1,01,424 | 1,773 | 336 | ... | ... | ... | ... | 1,03,712 |
| Kurnool | ... | 35,750 | ... | ... | ... | 394 | ... | 1,482 | 431 | 1,020 | ... | ... | 39,077 |
| Madras | 179 | 14,091 | 12,466 | ... | ... | 29,340 | 3,396 | 540 | 339 | 119 | 2,579 | ... | 63,049 |
| North Arcot | 5,895 | 34,277 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 40,172 |
| South Arcot | 31,249 | 10,555 | ... | ... | ... | ... | ... | ... | ... | ... | 50 | ... | 41,854 |
| Tanjore | 13,472 | 11,590 | ... | 1,205 | 1,930 | ... | 106 | 35 | ... | ... | 153 | ... | 28,491 |
| Trichinopoly | 13,528 | 32,123 | ... | ... | ... | 8,365 | ... | ... | 554 | ... | ... | ... | 54,570 |
| Madura | ... | 15,070 | 5,039 | ... | ... | ... | 7,242 | 74 | 858 | 579 | ... | ... | 28,862 |
| Tinnevelly | 409 | 488 | ... | ... | ... | ... | 1,100 | ... | ... | 91 | ... | ... | 2,088 |
| Coimbatore | 5,174 | 24,263 | ... | ... | ... | 1,051 | 1,549 | 13 | 20,442 | 72 | ... | ... | 52,564 |
| Salem | 1,358 | 42,283 | ... | ... | ... | 8,941 | 3,362 | 644 | 23,623 | ... | ... | ... | 80,211 |
| North Canara | ... | 40,419 | ... | ... | ... | ... | 155 | 187 | 717 | ... | ... | ... | 41,478 |
| South Canara | ... | 9,737 | ... | ... | ... | 1,262 | 2,236 | 26 | ... | ... | ... | ... | 13,261 |
| Malabar | 5,756 | 99,892 | ... | ... | ... | 20,128 | ... | 2,933 | 82 | 2,648 | ... | ... | 1,31,439 |
| Presidency | 823 | 9,457 | ... | 3,562 | ... | 1,94,001 | 15,573 | 1,06,342 | 8,898 | 320 | ... | 2,274 | 3,41,250 |
| Bangalore | ... | 1,134 | ... | ... | ... | 1,66,069 | ... | 943 | ... | 126 | ... | ... | 1,68,272 |
| Wellington | ... | 20,326 | ... | ... | ... | 1,23,476 | ... | 1,920 | ... | 944 | ... | ... | 1,46,666 |
| Total Rupees | 3,98,940 | 5,08,260 | 1,02,469 | 21,917 | 2,458 | 6,68,174 | 42,918 | 1,25,398 | 59,743 | 7,550 | 3,366 | 2,274 | 19,43,467 |

*Expenditure upon Repairs during the year* 1860-61.

| Districts. | Irrigation Works. | Communications. Roads and Bridges. | Communications. Navigable Canals. | Communications. Ports and Harbours. | Communications. Ferry Boats. | Buildings. Military. | Buildings. Revenue. | Buildings. Public. | Buildings. Judicial. | Buildings. Ecclesiastical. | Buildings. Marine. | Buildings. Educational. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Ganjam | 17,894 | 29,221 | .. | 32 | 105 | 107 | 5,531 | 75 | 323 | 131 | 42 | .. | 53,461 |
| Vizagapatam | 6,961 | 13,232 | .. | .. | .. | 1,438 | 2,241 | ... | 1,905 | 456 | 205 | 79 | 26,517 |
| Upper Godavery | .. | .. | .. | .. | .. | .. | .. | .. | ... | .. | .. | .. | .. |
| Godavery | 1,48,738 | 8,009 | 42,754 | .. | 1,321 | 4,072 | 1,538 | 4,545 | 1,823 | 46 | 391 | .. | 2,13,237 |
| Kistna | 92,072 | 16,886 | .. | .. | .. | 916 | 5,020 | 11 | 177 | 3 | 33 | .. | 1,15,118 |
| Nellore | 1,44,822 | 50,004 | 1,192 | ... | 278 | 180 | 311 | 469 | 318 | .. | .. | .. | 1,97,574 |
| Cuddapah | 63,701 | 53,804 | .. | .. | .. | 584 | 567 | 154 | 43 | .. | .. | .. | 1,18,853 |
| Bellary | 72,179 | 42,575 | .. | .. | .. | 10,328 | 1,766 | 19 | 738 | 362 | .. | .. | 1,27,967 |
| Kurnool | 18,138 | 21,644 | .. | .. | .. | 401 | 1,008 | 128 | 213 | 215 | .. | .. | 41,747 |
| Madras | 41,070 | 88,758 | 20,430 | .. | 138 | 15,814 | 2,236 | 5,269 | 2,795 | 63 | .. | .. | 1,76,573 |
| North Arcot | 64,596 | 47,142 | .. | .. | .. | 7,295 | 183 | 446 | 887 | 655 | .. | .. | 1,21,204 |
| South Arcot | 55,769 | 51,220 | .. | .. | .. | .. | 1,251 | 332 | ... | .. | 58 | .. | 1,08,630 |
| Tanjore | 1,57,478 | 77,338 | 93 | 7,712 | 1,339 | .. | 11,028 | 179 | 4,260 | 132 | 297 | .. | 2,59,856 |
| Trichinopoly | 88,356 | 26,526 | ... | ... | 298 | 2,664 | ... | 356 | 188 | .. | .. | .. | 1,18,388 |
| Madura | 36,903 | 8,977 | 1,487 | .. | .. | 30 | 2,185 | 99 | 432 | .. | 539 | .. | 50,652 |
| Tinnevelly | 49,227 | 21,854 | .. | .. | .. | 571 | 1,259 | .. | 254 | 60 | .. | .. | 73,225 |
| Coimbatore | 37,133 | 53,067 | .. | .. | .. | .. | 984 | 830 | 95 | 11 | .. | 597 | 92,717 |
| Salem | 30,009 | 75,714 | .. | .. | .. | 126 | 384 | 141 | 754 | .. | .. | .. | 1,07,128 |
| North Canara | .. | 79,646 | ... | .. | 29 | 32 | 4,078 | 218 | 399 | 8 | 3 | .. | 84,413 |
| South Canara | .. | 19,362 | .. | 6 | 139 | 477 | 2,959 | 166 | 250 | 47 | 7 | .. | 23,413 |
| Malabar | 1,151 | 16,548 | 447 | 42 | .. | 5,906 | 2,944 | 864 | 1,256 | 126 | 742 | .. | 30,026 |
| Presidency | 45 | 4,927 | .. | .. | .. | 38,796 | 1,090 | 19,939 | 3,518 | 2,010 | 4,308 | .. | 74,633 |
| Bangalore | .. | 6,089 | .. | .. | .. | 8,707 | .. | .. | .. | 349 | ... | .. | 15,145 |
| Wellington | .. | 2,763 | .. | .. | .. | 3,884 | .. | .. | .. | .. | .. | .. | 6,647 |
| Total Rupees | 11,26,242 | 8,15,306 | 66,403 | 7,792 | 3,647 | 1,02,328 | 48 563 | 34,240 | 20,628 | 4,674 | 6,625 | 676 | 22,37,124 |
| Sums transferred to the Municipal Commissioners | | | | | | | | | | | | | 24,397 |
| Grand Total | | | | | | | | | | | | | 22,61,521 |

GANJAM.

25. The allotment of funds to this District, entered in the Budget for 1860-61, amounted to Rupees 1,02,665. This was afterwards reduced to Rupees 83,727, but subsequently again augmented to Rupees 93,727 by the transfer of Rupees 10,000 from the sum assigned to the Presidency District.

Proceedings of Government, dated 15th March 1861, No. 526.

26. Of this amount there have been expended Rupees 92,142, viz:—

| | *New Works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation. ... ... ... ... ... ... | 7,953 | 17,894 |
| Communications. ... ... ... ... ... | 26,034 | 29,358 |
| Buildings. ... ... ... ... ... ... | 4,694 | 6,209 |
| | 38,681 | 53,461 |

27. The principal works under the head of Irrigation have been the Boari reservoir and channels in Goomsoor, commenced on the 1st April 1861. Up to the end of that month Rupees 1,675, out of an Estimate of 9,500, were expended, and every effort was being made to complete the reservoir sufficiently early to admit of a part of this year's rain being stored therein.

28. The next work is a regulating Sluice and new head to the Julnoor Channel, also commenced on the 1st April 1861, and upon which the outlay during that month amounted to Rupees 2,539.

29. Of minor new works, two Calingulahs and thirty sluices have been built at a cost of Rupees 2,390.

30. Under the head of Communications, portions of seven lines of road have either been materially improved or newly constructed, viz:—

| | | | | | |
|---|---|---|---|---|---|
| Road from Chicacole | to Calingapatam | 16 miles | improved... | Rupees | 3,411 |
| Do. Nursunnapettah | to do. | 7 do. | completed... | ,, | 4,490 |
| Do. Teckaly | to Nowpadah | 5 do. | do. | ,, | 2,575 |
| Do. do | to Kimedy boundary | 5½ do. | do. ... | ,, | 4,193 |
| Do. Bomally | to Nowpadah | 10 do. | do. ... | ,, | 3,745 |
| Do. Omaravilly | to Chicacole and Calingapatam road | 2 do. | ... | ,, | 1,899 |
| Trunk Road No. 6. | | | | | |
| Suntoshapuram to Dendagedda... | ... | ... ... | in progress | ,, | 2,499 |
| Do. between Rumbla and the Bengal frontier... | ... | ... | do. ... | ,, | 2,498 |

31. Besides these, the road from Kimedy to the Port of Poondy and a platform Bridge on the same line have been completed at a total cost of Rupees 4,801.

32. The new works in progress under the head of Buildings require no special remark.

33. With regard to Repairs, Rupees 17,751 have been expended on 219 tanks and channels and 15 miles of embankment, and for Rupees 29,228, 232 miles of road have been maintained for the most part in good order.

34. Several buildings of various kinds, as well as salt pans, salt platforms and channels, have also been repaired at a cost of Rupees 6,481.

35. The present requirements of the District, are the formation of good roads to the different salt pans, in addition to those which have been made of late years, and the construction of large tanks for the storage of water, at present allowed to run to waste, and for want of which great distress prevails at times, the supply obtainable being quite insufficient even for drinking purposes.

36. The sale of Salt in 1860-61, it is believed, has realized upwards of 7½ lacs of Rupees, the price per maund having been increased, and the Munsoorcottah pans re-established.

37. The prices of labor, and also of material, such as brick, stone, and chunam, are low in most parts of the District.

38. The Public Works in the Kimedy Zemindary, now under the Court of Wards, are managed by the District Engineer of Ganjam. The expenditure during 1860-61 has been Rupees 61,774 on works of communication and irrigation, the construction of which has tended to make the Zemindary peaceful and prosperous, and contributed to the well being of the Ganjam District.

## VIZAGAPATAM.

39. For this District a sum of Rupees 56,929 was entered in the Budget, and afterwards increased in November 1860 to Rupees 1,11,671. In consequence, however, of the stoppage of the works at the new Cantonment at Waltair, the non-sanction of the Gubbada project, and the delay which occurred in the construction of the Police Cutcherry at Vizagapatam, this latter sum was again reduced to Rupees 59,201 by the transfer of Rupees 52,470 to other Districts.

40. The expenditure has been Rupees 47,376 as follows :—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation | 2,698 | 6,961 |
| Communications | 1,377 | 13,232 |
| Buildings | 16,784 | 6,324 |
| Total Rs. | 20,859 | 26,517 |

41. The time of the Department in this District has been almost entirely occupied in maintaining existing works. Under the head of Irrigation no new works of any importance were undertaken ; while under that of Communications, the only one in progress was the construction of a road from Kotoor to the sanitarium at Harris' valley, on which Rupees 1,299 have been expended in forming 14 miles of ghat road of an average breadth of 8 feet.

42. Of the sum expended under the head of Buildings, Rupees 6,414 were laid out in the construction of a new Cantonment at Waltair. The work had hardly been begun when it was countermanded, and only the preliminary operations of levelling and sloping the sand hills were carried out.

43. At the buildings occupied by the European Veterans in the Fort, there was an outlay of Rupees 2,868 in completing certain alterations commenced in the preceding year, and a small sum of Rupees 292 was spent in the erection of temporary Barracks at the proposed sanitarium at the Harris' valley.

44. Certain temporary buildings have also been erected at Waltair, for the use of the Horse Battery of Artillery there stationed, at a total cost of Rupees 3,977. The remaining expenditure under the head of Buildings was incurred in providing accommodation for the 24th Regiment Native Infantry at Vizianagrum, and in completing various Revenue and Judicial Buildings in other parts of the District.

45. For the expenditure (Rupees 6,961) on repairs to Irrigation works, 33 tanks and 46 channels have been placed in good order, and for the outlay (Rupees 12,257) on roads. The following received the chief attention,

| | | |
|---|---|---|
| Trunk road No. 6 from Tonnee to Chittivalsa | 120 | miles. |
| Road from Vizagapatam to Vanalavalsa | 14 | " |
| Do. Do. to Ankapillay | 24 | " |
| Do. Bimlipatam to Chittivalsa | 4 | " |

46. The present condition of the principal roads is far from being satisfactory, but with the increased maintenance allowance recently sanctioned, it is hoped, that they will be materially improved.

47. Rapid progress is being made with the Survey of the line to connect Jeypore with Vizagapatam. The portion to the foot of the Galipurvatum Hills has been completed and the road nearly marked out.

48. Certain improvements to the Ports of Vizagapatam and Bimlipatam are much desired, and at the latter port the Merchants have offered to raise the necessary funds, as a loan to Government, and to pay such a rate of Impost on the trade as will meet the interest of the sum that may be so lent.

49. As respects the rates of wages and price of materials, there has been a rise throughout the District, notwithstanding which, in many parts it has been found difficult to obtain bricks and tiles of a good quality.

## UPPER GODAVERY.

50. No provision having been made in the Budget for opening up the navigation of the Upper Godavery, the Government of India were applied to in April 1860, for a grant of three lacs of

Rupees. In September following the Madras Government authorized an expenditure of 25,000 Rupees on the works from the repair funds of the Godavery District for improving the river between Budrachellum and Dowlaishwaram. A second reference on the subject of the works in the Upper Godavery was made in October 1860, to the Supreme Government, which resulted in sanction being given to the expenditure of the three lacs of Rupees abovementioned. Owing, however, to the lateness of the season when this sanction was granted, and to the want of labor, the total outlay has only been Rupees 82,362, viz :—

Vide Proceedings of Government, dated 29th November 1860, No. 2470.

| | | |
|---|---|---|
| On improvements in the river-bed between Dowlaishwaram and Budrachellum... | Rupees | 19,560 |
| Permanent Works at the Sinteral Barrier...... | " | 45,905 |
| Building and putting together Hulls of two Steamers........ | " | 16,897 |

51. Besides these sums, Rupees 25,367 were expended from the Commissariat funds in the transport of the following Government Stores to different points in the river.

| | | | | |
|---|---|---|---|---|
| Commissariat Stores........ | 936 | tons. | 104 | miles. |
| Machinery and Tools.......... | 195 | " | 85 | " |
| Salt .......... | 110 | " | 65 | " |

and the whole work done was equivalent to 1,42,300 tons, carried by water one mile, at a cost of Annas 3 Pie 1, per ton per mile.

52. This high rate is owing to the late period at which the operations were underaken and to the difficulty of obtaining proper transit boats; but great as it appears, it is less than that given for the carriage of stores by land to Nagpore.

53. In addition to the foregoing, and exclusive of timber and bamboos, the traffic of the river for 25 miles above Rajahmundry is estimated at 32,000 tons, and by the removal of the old transit duties, the trade in timber has increased considerably. Last year 6,000 logs of teak were sent down to Coringa from the river Pranheeta, a place from whence it is believed teak was never before exported.

54. The works in the river-bed between Dowlaishwaram and the first barrier consisted of

1st. The temporary improvements of the shoals by bandals (hurdles).

2nd. The fixation of the deep Channel by means of wing-dams and the removal of rocks.

55. The first were successful in maintaining a channel 3 feet deep from November to the middle of February, with the exception of the shoal at Rudrumcota at the confluence of the first tributary, the Sebbery, where difficulty is always experienced, and the result of the bandal system is considered to have been satisfactory and encouraging.

56. With regard to the second object, little was done towards its accomplishment, owing to the want of labor. Two wing-dams were partially built, one at the confluence of the Sebbery, and the other at Koyidtha, 15 miles below it, the effect of which remains to be seen.

57. The operations at the Sinteral barrier were, in consequence of a deficiency of labor, confined to such as were of a preparatory nature.

58. Besides the engineering operations, the transport and sale of salt along the river have been attended to by Captain Haig. In March 1860 one depot was established at Kunta, 22 miles up the Sebbery. In July following another was opened at Rudrumcota, and in October a third was formed at Budrachellum, but the two latter have since been closed.

59. The sales which were in great part local, amounted to 4,051 maunds.

60. The season has been comparatively unhealthy, in consequence of the prevalence of fever; but only one casualty occurred among the European Subordinates, and that not properly attributable to fever.

61. Referring to the question regarding the difficulty of obtaining labor, it is considered that the transfer of the Taluqs on the left bank of the river to the British Government will have a most beneficial effect upon the operations, and restore to the people a feeling of confidence and security which did not before prevail.

## GODAVERY.

62. The original sum sanctioned for expenditure in this District was Rupees 3,74,423, but the revised allotment amounted to Rupees 2,99,100 which was subsequently increased to

Rupees 3,19,100 by the transfer of 20,000 Rupees from Vizagapatam, and of this amount Rupees 3,16,366 were expended in the following manner.

| | *New works* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation................ | 77,040 | 1,48,738 |
| Roads and Bridges......... | ... | 8,009 |
| Canals........................ | 6,988 | 42,754 |
| Ports and Harbours...... | 17,072 | ... |
| Ferry Boats............. | .. | 3,21 |
| Buildings.................. | 2,029 | 12,415 |
| | 1,03,129 | 2,13,237 |

63. The most important work of irrigation and navigation combined undertaken, was the lock joining the Nursapore Canal with the Godavery at Nursapore. This work, 150 feet in length and 20 feet in breadth, was commenced in February 1860, and completed and opened for traffic on the 27th December following, at a total cost of Rupees 22,851, since which upwards of 1,400 boats have availed themselves of it.

64. The next work in importance was a low lift-lock on the Amlapore Canal at Markamala, which has been nearly completed, together with a short cut connecting the main canal with the canal leading to Bendamorlunka, and which, when finished, will afford an unbroken line of navigation through the delta of 45 miles in length. The expense on these works has been Rupees 5,534.

65. Another work, consisting of a cut 2½ miles in length and intended for the drainage of a hitherto flooded part of the Amlapoor Taluq, has also been executed at a cost of Rupees 4,654.

66. The rest of the expenditure has been incurred in constructing a large culvert, irrigation sluices, and small aqueducts.

67. Under the head of Communications are composed works executed to navigable canals, and ports and harbours of the former, the most important was the high level canal from Bezwada to Ellore, 14½ miles in length, in the Godavery District, and on which the outlay has been Rupees 50,646. The part between Dendalore and Ellore, 2¼ miles, has been finished, and 8 miles of the remaining portion is nearly completed. A lock 150 feet in length has also been built. Of ports and harbours, the works undertaken consist of the construction of a Light-house, improvements of stone groynes, dredging in the river, and the erection of a new Flag Staff at Cocanada, involving an aggregate outlay of Rupees 16,994. The column of the Light-house has been carried up to a height of 35½ feet. One sea dredge has been used in the river since July 1860, and another was completed in last January, but for want of a sufficiency of spoil boats has not been set to work. The Flag Staff awaits the arrival of wire-rigging before it can be set up.

68. At Cocanada the lower portions of the land purchased in 1860 by certain Merchants have been raised and partially re-claimed from the river by means of a stone revetment along the bank. The river in front has also been dredged to a depth of from 15 to 16 feet below high water-mark, and a short road made from the bridge. The expenditure on these improvements has been Rupees 4,776, out of Rupees 7,415 obtained by the sale of the land.

69. Under the head of Buildings, no new works of importance have been performed.

70. The outlay on account of repairs to Irrigation works has been 33,479 Rupees less than in 1859-60, and averaged about 4 per cent. on the Land Revenue. The chief repairs were those carried out to the Cocanada and Samulcottah Canals.

71. In the river near the Gunnarum Aqueduct, Rupees 4,994 were expended on groynes required to regulate the river-bed and get rid of a large sand-bank which had formed in the vicinity of the work.

72. At the anicut and its subsidiary works, the expenditure has been Rupees 39,550, inclusive of the cost of extraordinary repairs to the Dowlaishwaram under-sluices, and to the apron of the Muddoor branch, both of which were greatly damaged in the previous freshes. A sum of Rupees 12,091 was also laid out in the purchase of a stock of bamboos and stone to meet emergencies, and in the construction of a large stone boat.

73. The general state of the works throughout the District is satisfactory. The anicut itself has been thoroughly examined and repaired, and is in very fair order.

74. The Workshops have been busily engaged. During the year 4 Steamers, 2 Dredges, and 16 Punts have been finished; one large Iron Steamer, 13 Punts, and 3 Canal boats put together and launched, and the greater part of the machinery of two dredges fitted up.

75. In the Dockyard, one hull of a large Steamer, and a 90 ton Boat have been built, and two spoil boats converted into cargo boats.

76. At the Quarries 35,600 tons of stone of various kinds have been quarried. Four channel dredges have been employed at a cost of about Rupees 14,000, and during the last four months of the year, a Steamer was successfully employed on the ferry at Rajahmundry. The receipts amounted to Rupees 2,709, and the expenses to Rupees 2,684.

77. The exports by sea this year are the highest yet known having reached the sum of Rupees 50,28,235, while the Imports were Rupees 6,41,500. By land the exports amounted to Rupees 6,70,274, and the Imports to Rupees 691, as shown in the following comparative Statement:—

| Articles. | Exports. | | | | Imports. | | | |
|---|---|---|---|---|---|---|---|---|
| | 1860-61. | | 1859-60. | | 1860-61. | | 1859-60. | |
| | By sea. | By land. | By sea. | By land. | By sea. | By land. | By sea. | By land. |
| | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Rice, Paddy, &c. | 44,74,745 | 6,70,274 | 28,47,909 | 4,13,421 | 6,41,500 | 691 | 4,67,889 | 881 |
| Gingely seeds, *viâ* Yanam.... ... | 5,53,490 | ...... | 3,97,743 | ...... | ...... | ...... | ...... | ...... |
| Total... | 50,28,235 | 6,70,274 | 32,45,652 | 4,13,421 | 6,41,500 | 691 | 4,67,889 | 881 |
| Treasure... ...... | 1,21,400 | ..... | 11,58,185 | ...... | 19,13,709 | .... | 9,15,397 | ...... |
| Accountant General's Bills .... | ...... | ..... | ...... | ..... | 20,67,200 | ...... | 9,28,430 | ...... |
| Grand Total... | 51,49,635 | 6,70,274 | 44,03,837 | 4,13,421 | 46,22,409 | 691 | 23,11,716 | 881 |

78. The activity on the Canals has been very great, as will be seen from the following return of traffic.

STATEMENT of the Traffic showing the number of Boats and Rafts passing through the undermentioned Locks in Godavery Division.

| Months. | Grain. | | Other Agricultural produce. | | Salt. | | Lime and Shell Chunam. | | Firewood. | | Other Goods | | Empty Boats. | Total. | Passenger Boats. | Paddle Boats. | Transit Boats. | Total. | Grand Total, No. of Boats. | Rafts of Timber. | | Rafts of Bamboo. | | Total Rafts. | | Total value of Goods. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | | | | | | | | No. | Value. | No. | Value. | No. | Value. | |
| | | | | | | | | | | | | **DOWLAISHWERAM.** | | | | | | | | | | | | | | |
| 1860. | | RS. | | RS. | | RS. | | RS. | | RS. | | RS. | | RS. | | | | RS. | | | RS. | | RS. | | RS. | RS. |
| May........ | 95 | 15,358 | 110 | 35,099 | 45 | 11,016 | 8 | 234 | .. | ... | 84 | 20,757 | 180 | 522 | 15 | 21 | 54 | 90 | 612 | 68 | 4,150 | 103 | 1,074 | 171 | 5,224 | 87,688 |
| June.. ..... | 61 | 9,199 | 38 | 14,384 | 44 | 10,438 | 6 | 211 | .. | .. | 58 | 21,093 | 190 | 397 | 7 | 17 | 52 | 76 | 473 | 330 | 9,587 | 226 | 2,573 | 556 | 12,160 | 67,485 |
| July........ | 377 | 96,551 | 189 | 1,21,242 | 39 | 15,104 | 15 | 1,012 | .. | .. | 207 | 83,864 | 632 | 1,459 | 9 | 25 | 156 | 190 | 1,649 | 75 | 1,896 | 76 | 1,350 | 151 | 3,246 | 3,21,019 |
| August...... | 316 | 91,053 | 110 | 61,874 | 44 | 15,470 | 9 | 700 | .. | .. | 191 | 69,192 | 615 | 1,285 | 8 | 12 | 162 | 182 | 1,469 | 4 | 577 | 3 | 25 | 7 | 602 | 2,38,891 |
| September .. | 298 | 86,966 | 92 | 55,944 | 98 | 40,118 | 2 | 70 | .. | .. | 153 | 54,726 | 368 | 1,011 | 10 | 16 | 150 | 176 | 1,187 | 2 | 57 | .. | .. | 2 | 57 | 2,37,881 |
| October .. .. | 122 | 32,291 | 423 | 3,66,943 | 73 | 30,268 | 2 | 63 | 19 | 233 | 140 | 52,999 | 476 | 1,255 | 17 | 19 | 162 | 198 | 1,453 | 33 | 1,726 | 33 | 235 | 66 | 1,961 | 4,84,758 |
| November .. | 63 | 16,966 | 290 | 2,19,039 | 70 | 30,618 | 14 | 994 | 71 | 536 | 125 | 47,270 | 526 | 1,159 | 24 | 20 | 156 | 200 | 1,359 | 62 | 4,381 | 4 | 50 | 66 | 4,431 | 3,19,854 |
| December .. | 103 | 27,234 | 254 | 1,77,747 | 54 | 19,396 | 14 | 1,128 | 149 | 2,535 | 125 | 86,764 | 503 | 1,202 | 18 | 22 | 156 | 196 | 1,398 | 72 | 5,177 | 16 | 90 | 88 | 5,267 | 3,20,071 |
| 1861. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| January.. .. | 122 | 33,671 | 119 | 73,385 | 36 | 11,550 | 17 | 1,506 | 40 | 795 | 194 | 74,955 | 294 | 822 | 17 | 24 | 162 | 203 | 1,025 | 100 | 5,980 | 189 | 3,433 | 289 | 9,413 | 2,05,275 |
| February.... | 337 | 1,01,430 | 143 | 80,788 | 10 | 3,072 | 18 | 2,355 | 25 | 482 | 197 | 1,11,518 | 497 | 1,227 | 12 | 25 | 92 | 129 | 1,356 | 61 | 6,247 | 339 | 4,955 | 400 | 11,202 | 3,10,847 |
| March...... | 193 | 52,268 | 349 | 1,89,501 | 15 | 4,272 | 27 | 2,469 | 18 | 312 | 211 | 1,04,399 | 635 | 1,448 | 54 | 23 | 104 | 181 | 1,629 | 88 | 28,960 | 356 | 4,526 | 444 | 33,486 | 3,86,707 |
| April.. .. .. | 102 | 24,876 | 296 | 1,31,099 | 11 | 4,480 | 7 | 616 | 10 | 185 | 130 | 1,16,225 | 451 | 1,007 | 22 | 9 | 250 | 281 | 1,288 | 58 | 10,719 | 345 | 5,212 | 443 | 15,931 | 2,93,412 |
| Total.. | 2,189 | 5,87,863 | 2,413 | 15,27,045 | 539 | 1,95,802 | 139 | 11,358 | 332 | 5,078 | 1,815 | 8,43,762 | 5,367 | 12,794 | 213 | 233 | 1,656 | 2,102 | 14,898 | 853 | 79,457 | 1,730 | 23,523 | 2,683 | 1,02,980 | 32,73,888 |
| | | | | | | | | | | | | **BOBBERLUNKA.** | | | | | | | | | | | | | | |
| 1860. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May........ | .. | .... | 7 | 2,068 | .. | .. | .. | .. | 1 | 66 | 14 | 2,837 | 20 | 42 | 2 | 4 | .. | 6 | 48 | 2 | 255 | 1 | 2 | 3 | 257 | 5,228 |
| June........ | 14 | 2,051 | 5 | 1,209 | 2 | 300 | 7 | 108 | .. | .. | 30 | 6,637 | 76 | 134 | 5 | 5 | .. | 10 | 144 | 13 | 3,811 | 32 | 4,654 | 45 | 8,465 | 18,770 |
| July........ | 21 | 4,976 | 58 | 27,858 | 4 | 1,290 | 3 | 42 | .. | .. | 67 | 35,667 | 100 | 253 | 4 | 7 | .. | 11 | 264 | 6 | 757 | 4 | 256 | 10 | 1,013 | 70,246 |
| August .. .. | 15 | 3,519 | 42 | 16,027 | 4 | 1,560 | 1 | 15 | .. | .. | 56 | 20,424 | 94 | 212 | 8 | 9 | .. | 17 | 229 | 2 | 415 | .. | .. | 2 | 415 | 43,960 |
| September .. | 12 | 2,512 | 32 | 14,504 | 9 | 3,263 | 1 | 12 | .. | .. | 52 | 10,689 | 73 | 179 | 14 | 9 | .. | 23 | 202 | 1 | 54 | 1 | 640 | 2 | 694 | 31,674 |
| October .. .. | 14 | 2,336 | 55 | 24,490 | 10 | 2,828 | 1 | 12 | .. | .. | 58 | 17,339 | 95 | 233 | 60 | 4 | .. | 64 | 297 | 4 | 430 | 14 | 3,008 | 18 | 3,438 | 50,443 |
| November .. | 17 | 3,360 | 53 | 15,210 | 13 | 3,200 | 5 | 186 | .. | .. | 65 | 9,989 | 157 | 310 | 62 | 11 | .. | 73 | 383 | 8 | 1,933 | 22 | 3,438 | 30 | 5,371 | 37,316 |
| December.... | 12 | 2,440 | 30 | 6,876 | 17 | 4,863 | 4 | 111 | .. | ... | 95 | 23,650 | 126 | 284 | 64 | 9 | .. | 73 | 357 | 4 | 336 | 28 | 1,982 | 32 | 2,318 | 40,258 |
| 1861. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| January.. .. | 12 | 2,376 | 21 | 3,819 | 12 | 2,790 | 4 | 66 | 1 | 33 | 82 | 28,261 | 136 | 268 | 62 | 9 | .. | 71 | 339 | 4 | 947 | 15 | 1,109 | 19 | 2,056 | 39,311 |
| February.... | 23 | 4,650 | 26 | 7,643 | 5 | 1,400 | 2 | 25 | .. | .. | 135 | 31,568 | 170 | 361 | 61 | 15 | ... | 76 | 437 | 7 | 8,361 | 35 | 2,389 | 42 | 16,750 | 56,036 |
| March...... | 16 | 3,969 | 47 | 22,817 | 5 | 825 | 3 | 84 | .. | .. | 58 | 14,648 | 104 | 233 | 149 | 7 | .. | 156 | 389 | 4 | 2,079 | 30 | 2,717 | 34 | 4,796 | 47,139 |
| April ...... | 16 | 3,456 | 44 | 18,276 | 5 | 1,800 | 4 | 63 | 4 | 64 | 78 | 16,132 | 165 | 316 | 132 | 3 | .. | 135 | 451 | 9 | 2,899 | 33 | 3,642 | 42 | 6,541 | 46,332 |
| Total.. | 172 | 35,645 | 420 | 1,62,797 | 86 | 24,029 | 35 | 724 | 6 | 163 | 790 | 2,17,241 | 1,316 | 2,825 | 623 | 92 | .. | 715 | 3,540 | 64 | 22,277 | 215 | 23,837 | 279 | 52,114 | 4,86,713 |
| | | | | | | | | | | | | **VIZAISHWARUM.** | | | | | | | | | | | | | | |
| 1860. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May........ | 95 | 16,205 | 44 | 12,304 | 25 | 3,933 | 14 | 257 | 1 | 27 | 73 | 18,906 | 207 | 459 | 255 | 9 | 104 | 368 | 827 | 175 | 2,822 | [illegible] | 2,286 | 350 | 5,108 | 56,745 |
| June .. .. .. | 129 | 23,918 | 21 | 9,410 | 25 | 3,858 | 6 | 189 | 2 | 22 | 79 | 27,076 | 198 | 460 | 247 | 14 | 53 | 314 | 774 | 430 | 12,571 | 221 | 3,510 | 651 | 16,081 | 80,554 |
| July........ | 453 | 1,08,904 | 88 | 44,281 | 25 | 5,873 | 20 | 500 | .. | .. | 124 | 61,390 | 605 | 1,315 | 307 | 11 | 79 | 397 | 1,840 | 64 | 1,780 | 64 | 651 | 128 | 2,431 | 2,26,379 |
| August...... | 362 | 98,549 | 63 | 27,278 | 35 | 8,539 | 10 | 311 | 2 | 40 | 94 | 52,938 | 509 | 1,075 | 263 | 10 | 108 | 381 | 1,456 | .. | .. | 4 | 900 | 4 | 900 | 1,88,555 |
| September .. | 372 | 1,01,915 | 49 | 23,399 | 76 | 24,525 | 7 | 75 | 4 | 68 | 68 | 35,000 | 289 | 865 | 196 | 9 | 95 | 300 | 1,165 | 5 | 432 | 5 | 1,270 | 10 | 1,702 | 1,86,684 |
| October .. .. | 161 | 42,747 | 184 | 1,45,598 | 57 | 16,616 | 6 | 100 | .. | .. | 92 | 34,826 | 240 | 740 | 180 | 13 | 101 | 294 | 1,034 | 11 | 512 | 11 | 4,160 | 22 | 4,672 | 2,44,559 |
| November .. | 132 | 32,385 | 188 | 1,01,757 | 43 | 12,847 | 16 | 634 | 22 | 388 | 98 | 23,448 | 387 | 886 | 253 | 12 | 104 | 369 | 1,255 | 6 | 319 | 5 | 1,252 | 11 | 1,571 | 1,73,030 |
| December .. | 159 | 34,688 | 142 | 82,002 | 26 | 6,874 | 7 | 330 | 33 | 584 | 95 | 19,877 | 323 | 785 | 292 | 7 | 97 | 396 | 1,181 | 6 | 1,316 | 6 | 630 | 12 | 1,946 | 1,46,301 |
| 1861. | | | | | | | | | | | | | | | | | | | | | | | | | | |
| January .. .. | 182 | 44,413 | 90 | 53,269 | 19 | 4,680 | 31 | 1,016 | 31 | 396 | 106 | 32,800 | 276 | 735 | 292 | 18 | 108 | 418 | 1,153 | 160 | 2,945 | 120 | 1,941 | 280 | 4,886 | 1,41,460 |
| February.... | 373 | 98,838 | 94 | 57,188 | 6 | 1,361 | 21 | 926 | 26 | 392 | 91 | 37,351 | 483 | 1,094 | 289 | 19 | 96 | 404 | 1,498 | 256 | 12,761 | 500 | 4,567 | 756 | 17,328 | 2,13,384 |
| March.. .... | 274 | 75,258 | 275 | 1,55,877 | 11 | 3,083 | 34 | 1,309 | 15 | 302 | 74 | 20,792 | 610 | 1,293 | 357 | 29 | 102 | 488 | 1,781 | 80 | 6,336 | 81 | 2,981 | 161 | 9,317 | 2,65,938 |
| April...... | 231 | 26,430 | 221 | 99,530 | 5 | 1,215 | 14 | 481 | 37 | 548 | 94 | 23,894 | 459 | 1,061 | 342 | 13 | 102 | 457 | 1,518 | 200 | 6,130 | 223 | 3,927 | 423 | 10,057 | 1,82,155 |
| Total.. | 2,923 | 7,04,250 | 1,459 | 8,11,803 | 353 | 93,409 | 186 | 6,128 | 173 | 2,767 | 1,088 | 3,91,298 | 4,586 | 10,768 | 3,273 | 164 | 1,149 | 4,586 | 15,482 | 1,393 | 47,924 | 1,415 | 28,075 | 2,808 | 75,999 | 21,05,744 |

79. Comparing these returns with those of 1859-60, it will be observed that a considerable increase has taken place in the number of Passenger Boats. In 1853-54 the number passing along the three Canals was 995, and in the past year it reached 7,400 or 3,234 more than in 1859-60, showing most remarkably the value set upon cheap locomotion.

80. The season is represented to have been favorable, the rain-fall having amounted to nearly the average of 40 inches. Almost the whole of this, however, fell during the south-west monsoon, viz., two inches in October and 21 inches in September, so that there was a failure of the north-east monsoon.

81. The supply of water in the river during the hot weather was larger than in 1859-60, on the 10th May 1860, the discharge was 2,30,000 cubic yards per hour, or 30,000 cubic yards more than on the same date of the previous year.

82. The increasing prosperity of the District is most vividly marked in every way. The Land Revenue has reached nearly 34 lacs of Rupees being an increase of 7¾ lacs over the previous year, though it should be remarked, that out of this revenue, about 5 lacs are due to the addition of five Taluqs of the old Masulipatam District, and the present state of the District compared with its condition previous to the execution of the improvements may be briefly summed up as follows :—

1st.—The Revenue has been doubled.

2nd.—The Goods traffic increased thirty-fold.

3rd.—The Passenger traffic increased seven-fold, and.

4th.—The Export traffic increased twelve-fold.

## KISTNA.

83. The revised allotment sanctioned for this District amounted to Rupees 3,39,276, or Rupees 51,595 less than the sum entered in the Budget for expenditure in 1860-61, and this was still further reduced by the withdrawal of 30,000 Rupees for transfer to South Arcot. In consequence, however, of the want of labor and the lateness of the season when the new canal to Gudavada on the left or Masulipatam side of the Kistna was commenced, only Rupees 2,54,409 of the amount thus reduced was availed of, viz, for. :—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation...................... | 1,22,532 | 92,072 |
| Communications.............. | 13,564 | 16,886 |
| Building........................ | 3,195 | 6,160 |
| Total Rs. | 1,31,291 | 1,15,118 |

84. Under the first head, four very important channels have been in progress.

1st.—The high level Canal from Bezwada to Ellore.

2nd.—The new Duct irrigating the tract between the Poolairoo and the Boodemair.

3rd.—The Masulipatam Canal.

4th.—The Nizampatam Canal.

85. The first canal has been excavated to its full depth for a distance of 17 miles, and only 3 furlongs of the portion in the Kistna District remain to be finished. The expenditure has been Rupees 25,923, and the work is expected to be completed this month (July 1861). The navigation will then be extended 27 miles from Bezoarah. A lock and calingulah connecting this canal with the Boodemair, and so with the Colair Lake, Dowlaishwaram and the port of Cocanada has also been built and opened for traffic at an expenditure of Rupees 13,747.

86. The progress on the second channel 17 miles in length has not been satisfactory. Having been sanctioned only in November last, its cost was met by the diversion of funds allotted to other works in the District, and owing to the sickness which prevailed in the adjacent villages, and the consequent difficulty of obtaining a sufficient number of workmen, the expenditure instead of being as was anticipated Rupees 33,000, was only Rupees 19,828.

87. On the third work the expenditure has been Rupees 48,727, for which sum a lock at Nedemole, a large under-tunnel, two irrigation sluices, and 4 miles of Canal have been completed.

Both masonry and channel works have been delayed by the scarcity of labor, and it is feared, that another twelve month will elapse before the junction with the sea by the Pettah Canal is effected.

88. At the Nizampatam Canal the outlay was Rupees 11,055 in the part construction of a lock and calingulah at Kitchipudy, and Rupees 3,068 on similar works at Yintoor.

89. Of minor new works carried on during the year in connection with the annicut channels, the chief was a calingulah in the Ellur tank supplied by one of these channels completed in July 1860 at a cost of Rupees 1,486, and which has since proved of much service in preventing breaches.

90. Of Communications, the principal has been the road from Ibrampatam to the Nizam's frontier. The total distance is 65 miles, of which 50 miles opened for traffic in 1858-59 have been kept in excellent order with a maintenance allowance of 150 Rupees per mile. Of the remaining fifteen miles, nine will be shortly completed, three are in various stages of progress, and the whole line of road will be opened shortly for traffic. The expenditure has been for masonry works Rupees 1,260, and for gravel and earthwork Rupees 9,508.

91. Of Buildings, the principal is the Civil Dispensary at Guntoor, which is nearly finished. The total expenditure has been Rupees 4,715, of which Rupees 2,724 were laid out in 1860-61. The next work in importance are the Barracks at Jugglepett for the Sebundy Corps, which have also been nearly completed at a cost of Rupees 7,589.

92. As respects Repairs, Rupees 12,531 were spent on the annicut, being 1½ per cent. on its original cost, Rupees 8,051 in clearing the main channels, and the remainder of the sum entered under this head for Irrigation purposes was spent on works in the Delta and in the upper Taluqs.

93. On No. 7 Trunk Road from Madras to Secunderabad, for which there is a maintenance allowance of Rupees 3,000, twelve miles have been metalled, two road dams, and one drain built. The road from Masulipatam to Bezwada has also been slightly repaired at a cost of Rupees 950; but as the only material available is black cotton soil, it is never passable after a heavy shower of rain. A further sum of Rupees 6,723 has also been expended in improving various District roads.

94. Scarcity of labor is the principal difficulty encountered in this District. In the working season when the channels have to be cleared, it is found necessary to withdraw the tank diggers from the new works on which they may be employed and the progress of the latter is in consequence delayed.

95. The season generally has been very unfavourable and the irrigation was entirely dependant on the tanks supplied by the annicut channels. The exact extent of land irrigated has not been furnished, the statements supplied by the Collector having been incomplete. It is surmised, however, that there has not been any extensive increase in cultivation, for until the main heads are enlarged and the main distributing channels are carried out, none can be expected.

96. The usual Statements of traffic on the Bezoarah and Seetanagrum Canals are subjoined and exhibit the following results:—

| Canal. | Boats. | Rafts. | Value of Goods. |
|---|---|---|---|
| Bezoarah ... ... ... ... ... ... | 403 | 148 | 1,59,794 |
| Seetanagrum ... ... ... ... ...... | 55 | 42 | 17,013 |
| Total...... | 458 | 190 | 1,76,807 |
| In 1859-60 ... ... ... ... ... | 698 | 229 | 1,90,165 |
| Decrease...... | 240 | 39 | 13,358 |

97. From this it will be seen that there has been a falling off both in the number of boats and of rafts which have passed through the canals during the past official year, and that the value of goods carried on them is Rupees 13,358 less than in 1859-60. The cause of this difference has not been given, but attention will be requested to the circumstance.

*Statement of the Traffic showing the number of Boats and Rafts passing through the undermentioned Locks in Kistna Division.*

| Months. | Grain. | | Other Agricultural Produce. | | Salt. | | Lime and Shell chunam. | | Firewood. | | Other goods. | | Empty Boats. | Total. | Passenger Boats. | Paddle Boats. | Transit Boats. | Total. | Grand Total No. of Boats. | Rafts of Timber. | | Rafts of Bamboo. | | Total Rafts. | | Total value of goods. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | | | | | | | | No. | Value. | No. | Value. | No. | Value. | | |
| | | | | | | | | | | | | | BEZOARAH LOCKS. | | | | | | | | | | | | | | |
| 1860. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19 | 19 | .. | .. | .. | .. | 19 | 2 | 124 | 2 | 1,623 | 4 | 1,747 | 1,747 | |
| June | 1 | 58 | 2 | 66 | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 7 | .. | .. | .. | .. | 7 | 3 | 551 | 4 | 788 | 7 | 1,339 | 1,463 | |
| July | 11 | 1,964 | 9 | 2,818 | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 30 | .. | .. | .. | .. | 30 | 12 | 4,742 | 5 | 550 | 17 | 5,292 | 10,074 | |
| August | 10 | 1,282 | 27 | 19,548 | .. | .. | .. | .. | .. | .. | .. | .. | 45 | 82 | .. | .. | .. | .. | 82 | 2 | 1,117 | 3 | 516 | 5 | 1,633 | 22,463 | |
| September | 8 | 1,092 | 38 | 23,850 | .. | .. | .. | .. | .. | .. | .. | .. | 49 | 94 | .. | .. | .. | .. | 94 | 3 | 708 | .. | .. | 3 | 708 | 25,650 | |
| October | 12 | 2,072 | 59 | 68,620 | .. | .. | .. | .. | .. | .. | .. | .. | 29 | 100 | .. | .. | .. | .. | 100 | 2 | 305 | 4 | 685 | 6 | 990 | 71,682 | |
| November | 5 | 381 | 16 | 7,803 | 2 | 500 | .. | .. | 2 | 5 | .. | .. | 8 | 33 | 2 | .. | .. | 2 | 35 | 1 | 35 | 1 | 40 | 2 | 75 | 8,764 | |
| December | 5 | 210 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 12 | .. | .. | .. | .. | 12 | 16 | 4,480 | 2 | 206 | 18 | 4,686 | 4,896 | |
| 1861. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| January | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | .. | .. | 3 | 4 | .. | .. | .. | .. | 4 | 5 | 1,199 | 48 | 5,298 | 53 | 6,497 | 6,501 | |
| February | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 6 | .. | .. | .. | .. | 6 | 5 | 1,684 | 28 | 3,409 | 33 | 5,093 | 5,093 | |
| March | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14 | 14 | .. | .. | .. | .. | 14 | 14 | 1,216 | 1 | 245 | .. | .. | 1,461 | |
| April | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | No Return received from the District for April 1861. |
| Total | 51 | 7,059 | 151 | 1,22,705 | 2 | 500 | .. | .. | 3 | 9 | .. | .. | 193 | 403 | 2 | .. | .. | 2 | 403 | 65 | 16,161 | 98 | 13,360 | 148 | 28,060 | 1,59,794 | |
| | | | | | | | | | | | | | SEETANAGRAM LOCK. | | | | | | | | | | | | | | |
| 1860. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 3 | .. | .. | .. | .. | 3 | 9 | 1,788 | 7 | 930 | 16 | 2,718 | 2,718 | |
| June | 1 | 96 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 1 | .. | .. | .. | .. | 1 | 6 | 1,197 | 5 | 459 | 11 | 1,656 | 1,752 | |
| July | 19 | 2,632 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 24 | .. | .. | .. | .. | 24 | 5 | 1,428 | 4 | 405 | 9 | 1,833 | 4,465 | |
| August | 13 | 1,215 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 17 | .. | .. | .. | .. | 17 | 1 | 505 | 1 | 3 | 2 | 508 | 1,723 | |
| September | 10 | 1,968 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 0 | 10 | .. | .. | .. | .. | 10 | .. | .. | .. | .. | .. | .. | 1,968 | |
| October | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | |
| November | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | |
| December | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | |
| 1861. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| January | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4,288 | 2 | 99 | 4 | 4,387 | 4,387 | |
| February | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | |
| March | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | |
| April | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .... | No Return received from the District for April 1861. |
| Total | 43 | 5,911 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 | 55 | .. | .. | .. | .. | 55 | 23 | 9,206 | 19 | 1,896 | 42 | 11,102 | 17,013 | |

## NELLORE.

98. The amount entered in the Budget for this District was under the Proceedings of Government, dated 13th September 1860, reduced from Rupees 4,40,102, to Rupees 3,55,173, and subsequently in November to Rupees 3,30,170. With a view, however, to allow of a greater number of minor new works being carried out, this sum was afterwards increased to Rupees 3,45,173 by the transfer of 15,000 from the funds allotted to the Presidency District, and of this amount Rupees 3,20,930 were expended as follows:—

| | *New works.* | *Repairs.* |
|---|---|---|
| Irrigation | 1,06,837 | 1,44,822 |
| Communications | 11,255 | 50,004 |
| Canals | ...... | 1,192 |
| Ferries | ...... | 278 |
| Buildings | 5,264 | 1,278 |
| Total Rupees... | 1,23,356 | 1,97,574 |

99. The principal new work of Irrigation in progress was the Pennair Annicut, the body of which has been raised 7'-4" or to within 1'-8" of its full height, and the remainder is expected to be completed before the next freshes. The apron has also been built to an average breadth of 40 yards, and a new set of under-sluices with the approaches and wing-walls at the southern end constructed. The outlay during the year was Rupees 45,380, making a total of Rupees 93,949 up to the 30th April 1861.

100. At the Jaffer Saib Channel a new cut has been made to the old Survapillay Channel, the expenditure on which amounts to Rupees 39,724. The work performed consisted of excavation, the building of a bridge and a syphon sluice, and the partial construction of a bridge at Nabobpettah.

101. Of minor New Works a head sluice and escape calingulah were constructed to the supply channel of the Nellore tank at a cost of Rupees 7,342, and all the more important tanks have been placed in an efficient state, including the Ullur tank, at which Rupees 3,807 have been expended.

102. Under the head of Communications the principal new work has been the improvements to Trunk Road No. 6, where several masonry works have been built at an expense of Rupees 7,387.

103. Except in the Gúdúr Valley and between Kadavalur and Singaroyacunder, this line of road is represented to be in good condition, and now that sanction has been granted for the repairs of such portions of the above as are most urgently called for, it is hoped that the difficulty felt in passing over the line will be shortly removed.

104. The charges incurred in the District for Repairs amount to Rupees 1,95,847, of which Rupees 1,50,484 have been laid out on irrigation works.

105. The want of sufficient escapes to the numerous tanks has been remedied as far as possible. Out of those estimated for, 10 calingulahs and 3 sluices have been finished, and 21 calingulahs commenced. The majority of the minor tanks have also been placed in thoroughly serviceable order.

106. The want of labor for these repairs has been great though, in many instances, the villagers have been found willing to undertake those of their own tanks on contract, and this has been encouraged as much as possible.

107. The main roads in the District have been maintained in as good condition as the funds granted for the purpose would admit. One of the principal of these, viz., that from the Dorenal Pass to Kistnapatam has been improved at an outlay of Rupees 7,268, and made practicable for traffic along its whole length during the dry season; a further outlay is however required for bridges and tunnels along the western half of this line before it will be available during the monsoon.

108. The chief District Roads attended to were the Raupoor Road, the short branch from Trunk Road No. 6 to the port of Tadda on the Pulicat Lake, and the branch to Dugarazpatam.

109. The greatest assistance has been rendered to the Department by the Collector in putting a stop to trespasses or other misconduct on the part of villagers, as well as in regulating the water supply.

## CUDDAPAH.

110. The several allotments of funds sanctioned for this District were as follows:—

| | | |
|---|---|---|
| In the Budget for 1860-61. . ... | Rupees. | 1,65,316 |
| „ September 1860... ... | „ | 1,89,799 |
| „ November 1860...... ... | „ | 1,97,799 |

The latter amount was, however, subsequently reduced in March 1861, to Rupees 1,82,799 by the transfer of 15,000 Rupees to Tanjore; and Rupees 1,82,012 were expended in the following manner; the want of superintendence caused by frequent sickness among the subordinates of the Department preventing any greater outlay.

| | *New Works.* | *Repairs.* |
|---|---|---|
| Irrigation.. ... ... ... | 3,917 | 63,701 |
| Communications... .. ... | 55,122 | 53,804 |
| Buildings .. ... .. ... | 4,120 | 1,348 |
| Total Rupees... | 63,159 | 1,18,853 |

111. The new works in progress under the head of Irrigation, consisted of 12 sluices and 15 calingulahs, none of which call for special remark.

112. Of Communications, 68 miles of new road were made, the greatest expenditure being on the Cuddapah and Madras Road, where it amounted to Rupees 26,549. On this line, four miles out of Cuddapah have been metalled, a new road made through the Bakrapetti Pass, and another over a long rocky ridge near Mangampett, while from Mannur to the left bank of the Pulongeru river, a distance of 14 miles, the road has been raised, drained and otherwise improved. Several tunnels have also been built.

113. The next greatest outlay has been on the road from Vencatramarazpett to Royachoti. From Royachoti to the foot of the Sanepoy Ghat, 17 miles in length, this line has been cleared of jungle, levelled and raised, side channels cut, avenue trees planted, and a small portion metalled over the first portion from Sanepoy to the Cheyair river a trace 5 miles in length, and 4 yards in breadth has been nearly completed and will be shortly passable for carts. The expenditure during the year has been Rupees 15,161.

114. The next road which may be noticed, is that from Cuddapah to Pulivendla on which the expenditure has been Rupees 7,126. During the past year 14 miles of this road have been cleared, levelled and raised, side channels cut, and tunnels and road dams built.

115. Another important road in progress was that from Cuddapah to Kurnool. This road in parts has been greatly improved at a cost of Rupees 3,162, particularly a very bad portion near Chentagunta under the bank of a large tank there, which was formerly almost impassable for carts, but much still remains to be done to this very important line of communication.

116. Besides the above a new road has been made between Mudnapilli and Gurramkonda, at a cost of Rupees 3,014.

117. With regard to Buildings, the District Engineer's Office at Cuddapah was the principal work. The building is nearly finished and the outlay has been Rupees 2,786. The last of the Overseers' Sheds required, has also been built, and one of these buildings is now in every Taluq, excepting Pulivendla where one is not wanted.

118. Of repairs to Irrigation, the chief work was the restoration of the Chinna Orimpaud tank. Since its commencement in December last, the progress has been very satisfactory and its early completion may be expected. The expenditure during four months was Rupees 13,326 out of an estimate of Rupees 34,000. The remaining works carried out under the above head consisted of 193 tanks and 35 channels, at which the expenditure was Rupees 50,374, viz., Rupees 34,025 on tanks, and Rupees 16,349 on channels.

119. The irrigation works throughout the District are in very good order, those in the Rajempett Taluq injured by the storm of November 1859 having been thoroughly restored, and if the Royts could be compelled to carry out the necessary petty repairs after the monsoon, it is considered that the annual outlay for repairs would greatly decrease, but at present not only do they refuse to execute the most trifling work to tanks, but they as often seriously endanger their safety by wantonly cutting through the banks and blocking up the calingulahs.

120. The main lines of communications have been kept in repair. The work done was the repair of 349 miles of road, the construction of 60 tunnels and 94 road dams, and the repair of two bridges at an aggregate expense of Rupees 53,495. Inclusive, therefore, of new works, the total outlay on roads has been Rupees 1,08,615, but though all the great and many of the minor lines have been much improved there is not one road in the District bridged and metalled throughout, and consequently not one passable at all seasons of the year.

121. The rates of labor and prices of material have risen considerably in every Taluq through which the Railway passes; but it is expected that they will fall again where the Railway works are completed. Notwithstanding this competition no particular difficulty has been experienced in obtaining labor, even in the Rajempett Taluq, where the Railway works have been most vigorously carried on throughout the year.

122. The season has been very unhealthy and the subordinate members of the Department have as above observed, suffered much from sickness, particularly in the Rajempett Taluq, where nearly one-third of them were employed in repairing the works injured by the storm of November 1859. Indeed, at one time, so many were laid up with fever, that it was feared the progress of the works would have been retarded. During the year three Sub-Overseers died, one from cholera and two from fever, and such is the dread which the Natives have of the District, that none could be obtained to fill up vacancies in the lower subordinate grades.

123. The monsoons were a total failure, except in the Khadri and Cuddapah Taluqs. From the end of October 1860 to that of April 1861, scarcely any rain fell, and the whole country is parched and dried up. Few of the large tanks filled, and the crops under many of the small reservoirs withered for want of water. Fortunately, however, a great extent of land in the Cuddapah District is irrigated from wells, and thereby actual suffering among the lower class of people has been prevented.

## BELLARY.

124. The Budget allowance for this District amounted to Rupees 3,29,261, subsequently reduced in September 1860 to Rupees 2,07,966. In November following this sum was increased to Rupees 2,46,736 and afterwards to Rupees 2,60,736 by the transfer of Rupees 14,000 from the Vizagapatam District.

125. The total expenditure has been Rupees 2,31,679, viz. :—

| | *New works.* | *Repairs.* |
|---|---|---|
| Irrigation... ... ... | 120 | 72,179 |
| Communications... ... | 59 | 42,575 |
| Buildings ... ... ... | 1,03,533 | 13,213 |
| Total Rupees..... | 1,03,712 | 1,27,967 |

126. The chief outlay has arisen from Military buildings, the principal of which is the new Hospital at Bellary.

127. This building is now nearly completed and will be shortly made over to the Military authorities for occupation. Its total cost up to the 30th April 1861 was Rupees 98,599, of which Rupees 43,594 were laid out during the past year.

128. The next most important work is the Married Men's quarters at the same station. Of these, one range has been fully, and another half completed at an outlay of Rupees 28,669. The former is now occupied.

129. The following Military buildings have also been completed :—

| | | | |
|---|---|---|---|
| 1. | Quarters for the Garrison Serjeant-Major at Bellary......... | Rupees | 2,591 |
| 2. | Racquet Court for the European Troops at do. .... ...... | „ | 1,280 |
| 3. | Sundry buildings for the accommodation of the D Troop Horse Artillery ..... .... .... ... ... | „ | 3,947 |
| 4. | Out-offices to the Married Men's quarters ... ... ... | „ | 2,298 |

130. In addition to these works certain improvements have been commenced and partly carried out to the old Hospital at Bellary now occupied by the married men of the Artillery, the expense attending which, is Rupees 9,233; and Rupees 3,058 have been spent in the collection of materials for the temporary Barracks for Artillery under construction at that station.

131. The only Civil Buildings of note in progress were the Taluq Kacheri at Hoovinhudgully, and the Travellers' Bungalows at Paundy and Gaurladumah. On the Taluq Kacheri and the Bungalow at Paundy, both of which were completed in September 1860, the total expenditure was Rupees 9,062 and 2,808 respectively; and the cost of the Bungalow at Gaurladumah, which was also finished in April 1861, was Rupees 2,231.

132. None of the Irrigation works carried out call for special remark. The principal expenditure under this head has been in Nos. 2 and 3 Ranges. In the former 45 tanks and 3 channels were improved and repaired at an outlay of Rupees 13,474, and in the latter Range 131 works of various descriptions were carried on, and partly completed at a cost of Rupees 29,084. The total number of tanks and channels repaired and otherwise improved throughout the District was 266, and the expenditure on their account amounts to Rupees 7,2180.

133. The extent of work performed to roads was 42 miles made, and 442 miles repaired at a cost of Rupees 40,383.

134. The prices of labor and material have, continued very high during the whole year and have a tendency to rise still higher. Much difficulty has also been experienced in obtaining artizans, though every inducement was held out to them to take employment in the Department.

135. The season was not favorable. During the year the rains were very partial, and though sufficient fell for the dry crops, many of the tanks did not receive their proper supply of water. The reduction of the assessment, however, combined with a judicious outlay on the works of irrigation have had a most beneficial effect. Already a great increase has taken place in the revenue, and the improved state of the tanks and the security which is now felt in their stability have induced the people to extend still more the cultivation dependant on them.

KURNOOL.

136. The original allotment of funds in the Budget for this District amounted to Rupees 1,20,742. In September 1860, this sum was reduced to Rupees 83,171, from which a further sum of 3,000 Rupees was deducted in March following and transferred to Coimbatore.

137. The expenditure amounted to Rupees 80,824, viz :–

| | *New works.* | *Repairs.* |
|---|---|---|
| Irrigation.............. | ...... | 18,138 |
| Communications..... | 35,750 | 21,644 |
| Buildings............ | 3,327 | 1,965 |
| Total Rupees... | 39,077 | 41,747 |

138. No new works of Irrigation were undertaken, and under the head of Communications the most important work in progress was the bridge over the Hindree river.

139. This work, consisting of 19 arches of 45 feet each, was completed and opened for traffic in August last. Its total cost has been Rupees 76,535, of which 10,058 Rupees were laid out during the past year.

140. On the Nundy Canama Pass, 22 miles in length have been improved, several miles metalled, two bridges completed, and provision made for securing the road, which is now in very good order, from damage during heavy rains. The expenditure has been Rupees 8,674, making a total outlay of Rupees 35,140 out of the sanctioned estimate of Rupees 50,000.

141. The new road between Nundial and Gazoolapillay, 12 miles in length, leading to the above pass, has been completed at a cost of Rupees 4,488; and on the road between Nundial and Kurnool three bridges have been built, the expenditure on which was Rupees 7,992, but their approaches have not yet been finished.

142. At the Munteral Canama Ghat formerly known as the Dorenal pass, the most difficult portions between Potarazpenta and Rollapenta, $2\frac{1}{2}$ miles in length, have been rendered passable for carts, and only half a mile of easy work remained to be done to have completed the Pass throughout for carts, when operations were stopped by nearly all the coolies being prostrated by disease. The Ghat has, however, been so much improved as to be of great benefit to the Brinjarries shortening their journey through the hills by two days, and greatly facilitating the transit of salt to Kurnool and Bellary. The yearly traffic in future is estimated at 90,000 bullocks.

143. The only other road which needs notice is that between Nundial and Cuddapah on which there has been an expenditure of Rupees 1,846 in improving the worst portions with a view to expedite the carriage of the stones for the works of the Irrigation Company at Kurnool.

144. In Buildings there has been an outlay of Rupees 3,809 for completing the Engineer's Office and Store Yard, carrying out certain alteration to the Court House, and in constructing a commodious School House.

145. Of repairs to Irrigation works 75 tanks, 95 channels, and two wells, have been put in good order at a cost of Rupees 17,872, being about 6 per cent. on the revenue; the principal outlay having been at the Cumbum, Nundial, Conoorcoontla and Owk tanks, the latter of which is an old and well designed native work with an Ayacut assessment of Rupees 18,334. Owing, however, to the supply channel having fallen into a state of disrepair, the average revenue derived from it has been latterly only Rupees 5,153. During the past year, Rupees 2,082 were laid out in closing several breaches and this expenditure will, it is expected, have a very beneficial effect upon the revenue.

146. On repairs to Roads there has been an outlay of Rupees 21,504 in keeping 256 miles of made-road in good order, in which condition they are said to be generally throughout the District.

147. The Department has worked in harmony with the villagers and has not experienced any difficulty in procuring the requisite labor for the repairs to irrigation works.

148. The wasteful and indiscriminate felling of timber noticed in the Annual Report for 1859-60, is represented to still continue, notwithstanding the issue of orders on the subject by Government.

## MADRAS.

149. In the Budget the amount allotted to this District was Rupees 3,99,442, but the actual sum made available for expenditure was Rupees 2,48,488, of which Rupees 2,39,622 were laid out in the following manner, and of the remainder 4,000 Rupees were transferred to Coimbatore.

| | *New works.* | *Repairs.* |
|---|---|---|
| Irrigation | 179 | 41,070 |
| Communications | 26,557 | 1,09,326 |
| Buildings | 36,313 | 26,177 |
| Total Rupees... | 63,049 | 1,76,573 |

150. It will be observed that the operations of the Department in connection with Irrigation were confined chiefly to repairs and minor new works. With regard to Communications, the largest outlay was on Trunk Road No. 8 where it amounted to Rupees 13,400 in re-metalling the portion between the 49th and 59th miles. Rupees 12,000 were also laid out in deepening the Cochrane's Canal.

151. Of Buildings, the attention of the Department has been chiefly directed to the Military works at Saint Thomas' Mount. The most important in progress were the following:—

| | | |
|---|---|---|
| 1. | Constructing Eastern range of buildings to the Artillery Depôt... | Rupees 12,582 |
| 2. | Army School Rooms | „ 5,856 |
| 3. | Verandahs to Canteen, and Skittle Alley and open drain in rear of Skittle Alley | „ 884 |
| 4. | Verandahs to Gun-sheds | „ 3,890 |
| 5. | Drain in rear of Hospital | „ 2,080 |
| 6. | Commissariat Store Godown | „ 1,271 |

152. The first two works are yet in progress; the others have been completed.

153. The repairs of Irrigation works consisted of 200 tanks and channels, on which there was an expenditure of Rupees 41,070. These are of the ordinary description and call for no remark.

154. As respects repairs of Communications, the outlay on the main lines of roads, amounted to Rupees 93,977, and of this sum Rupees 21,070 were laid out on Trunk Road No. 8 in repairing the portions between Palaveram and Autcherawauk, 58¾ miles in length. This line is now in very fair order, though the wear and tear has, in consequence of the dryness of the season, and the increased traffic, been more than ordinary during the past year.

155. Upon Trunk Road No. 1 the expenditure was Rupees 25,000. Its condition and the measures to be taken for its improvement have recently been under the consideration of Govern-

ment, and from a special report recently submitted, it is observed that the greater portion of the line in this District is still in bad order, though much improved to what it was in 1859-60.

156. Trunk Road No. 6 has also received a fair share of attention. Between Yerkenjairy and Aurumbauk, Rupees 11,253 have been laid out in repairs; but complaints are made by parties near Madras regarding its present condition, portions of the road thereabouts still in bad order and not passable for spring vehicles. A statement of the traffic was lately laid before Government, and estimates are now under preparation for the thorough repair of the line and for its future maintenance.

157. The rest of the expenditure under the head of repairs to Communications has been on the Cantonment roads at Saint Thomas' Mount, and on the several minor roads of the District. Those connecting Madras and the Mount with Punamali and Palaveram are in tolerably good condition, but the dryness of the season has operated as unfavourably upon them as upon nearly all the others in the District.

158. Of repairs to Buildings, Revenue and Public, Rupees 4,732 were laid out in alterations to Government House at Guindy; and 3,347 in improvements to Homes' House for the purpose of converting into a Kacheri for the Collector.

159. At Pulicat the Light House has been completed at a cost of Rupees 3,818, and nothing remains to be done there but to fix the Lantern and to build a house for the Superintendent.

160. On the Eastern Coast Canal several improvements have been made at the northern end, with a view to preventing the silt being carried into it from the Pulicat Lake.

161. On the Southern branch from the Adyar to Sadras the traffic has increased, and it is considered that it would be still more developed if the line were opened out to the Palaur river. The consideration, however, of this scheme has in a late Order of Government been deferred. The expenditure on both branches during the year has been Rupees 19,600.

No. 1273, dated 10th July 1861.

162. The following are the usual statements of traffic upon each branch of the Canal and of the toll collections:—

## TABLE A.

*Comparative Statement of Toll Collections in the Northern Branch of the East Coast Canal, for the official years* 1859-60 *and* 1860-61.

| Cargo. | 1859-60. | | | | | 1860-61. | | | | | Relative increase or decrease. Increase in Boats, Tonnage and Toll, for the official year 1860-61. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Boats. | Tons. | Toll. | | | Boats. | Tons. | Toll. | | | Boats. | Tons. | Toll. | | |
| | | | RS. | A. | P. | | | RS. | A. | P. | | | RS. | A. | P. |
| Miscellaneous Traffic.. ... | 8,217 | 85,125¼ | 21,281 | 5 | 0 | 7,805 | 89,568 | 22,392 | 0 | 0 | −412 | +4,442¾ | +1,110 | 11 | 0 |
| Salt........ | 1,713 | 42,058 | 10,514 | 8 | 0 | 3,413 | 82,815 | 20,703 | 12 | 0 | +1,700 | +40,757 | +10,189 | 4 | 0 |
| Total.. | 9,930 | 1,27,183¼ | 31,795 | 13 | 0 | 11,218 | 1,72,383 | 43,095 | 12 | 0 | +1,288 | +45,199¾ | 11,299 | 15 | 0 |

TABLE B.

*Comparative Statement showing the Increase and Decrease of the number of Boats, Tonnage, and the amount of Toll collected on each sort of Goods which arrived at the Cochrane's Basin, passing through the East Coast Canal, during the official years* 1859-60 *and* 1860-61.

| Names of Articles carried. | 1859-60. | | | | | 1860-61. | | | | | Relative Increase and Decrease for the official year 1860-61. | | | | | | | | | | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Increase. | | | | | Decrease. | | | | | |
| | Boats. | Tons. | Toll. | | | Boats. | Tons. | Toll. | | | Boats. | Tons. | Toll. | | | Boats. | Tons. | Toll. | | | |
| | | | RS. | A. | P. | | | RS. | A. | P. | | | RS. | A. | P. | | | RS. | A. | P. | |
| Bark (auvarum) ... ... | 11 | 77 | 19 | 4 | 0 | 16 | 118 | 29 | 8 | 0 | ... | 3 | 0 | 12 | 0 | 3 | ... | 0 | 0 | 0 | |
| Do. (valum) ... ...... | 8 | 38 | 9 | 8 | 0 | | | | | | | | | | | | | | | | |
| Bones ... ... ... ... | 2 | 4 | 1 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 0 | |
| Baggages ... ... ...... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Baskets ... ... .. | 2 | 19 | 4 | 12 | 0 | ... | ... | 0 | 0 | 0 | ... | .. | 0 | 0 | 0 | 2 | 19 | 4 | 12 | 0 | |
| Bengal gram ... ...... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Brooms ... ... ... | ... | ... | 0 | 0 | 0 | 4 | 38 | 9 | 8 | 0 | 4 | 38 | 9 | 8 | 0 | ... | ... | 0 | 0 | 0 | |
| Bangles ... ... ...... | 1 | 7 | 1 | 12 | 0 | 2 | 31 | 7 | 12 | 0 | 1 | 24 | 6 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Do. stones ... ... | 1 | 7 | 1 | 12 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 1 | 7 | 1 | 12 | 0 | |
| Bricks ... ... ...... | 86 | 1,654 | 413 | 8 | 0 | 80 | 1,786 | 446 | 8 | 0 | ... | 132 | 33 | 0 | 0 | 6 | ... | 0 | 0 | 0 | |
| Bamboo mats ... ... | 2 | 14 | 3 | 8 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 2 | 14 | 3 | 8 | 0 | |
| Chillies ... ... ...... | 183 | 2,550 | 637 | 8 | 0 | 151 | 1,702 | 425 | 8 | 0 | ... | ... | 0 | 0 | 0 | 32 | 848 | 212 | 0 | 0 | |
| Charcoal .. ... ... | 84 | 534 | 133 | 8 | 0 | 100 | 669 | 167 | 4 | 0 | 16 | 135 | 33 | 12 | 0 | ... | ... | 0 | 0 | 0 | |
| Chunam ... ... ...... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Cheyroot ... ... ... | 1 | 26 | 6 | 8 | 0 | 4 | 51 | 12 | 12 | 0 | 3 | 25 | 6 | 4 | 0 | ... | ... | 0 | 0 | 0 | |
| Cocoanuts... ... ...... | 4 | 35 | 8 | 12 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 4 | 35 | 8 | 12 | 0 | |
| Cloth ... ... ... ... | ... | ... | 0 | 0 | 0 | 54 | 220 | 55 | 0 | 0 | 54 | 220 | 55 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Casangoo ... ... ...... | 6 | 54 | 13 | 8 | 0 | 7 | 60 | 15 | 0 | 0 | 1 | 6 | 1 | 8 | 0 | ... | ... | 0 | 0 | 0 | |
| Country potatoes ... ... | 3 | 19 | 4 | 12 | 0 | 4 | 28 | 7 | 0 | 0 | 1 | 9 | 2 | 4 | 0 | ... | .. | 0 | 0 | 0 | |
| Cocoanut plants ...... | 2 | 6 | 1 | 8 | 0 | ... | ... | 0 | 0 | 0 | ... | .... | 0 | 0 | 0 | 2 | 6 | 1 | 8 | 0 | |
| Drumsticks ... ... ... | 35 | 169 | 42 | 4 | 0 | 40 | 173 | 43 | 4 | 0 | 5 | 4 | 1 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Empty boats ... ...... | 427 | 275¾ | 68 | 15 | 0 | 81 | 97 | 24 | 4 | 0 | ... | ... | 0 | 0 | 0 | 346 | 178¾ | 44 | 11 | 0 | |
| Do. rafts ... ... ... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Faggots ... ... ...... | 1,338 | 32,497¼ | 8,124 | 5 | 0 | 1,313 | 31,685 | 7,921 | 4 | 0 | ... | ... | 0 | 0 | 0 | 25 | 812¼ | 203 | 1 | 0 | |
| Furniture ... .. ... | 1 | 19 | 4 | 12 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 1 | 19 | 4 | 12 | 0 | |
| Grain ... ... ...... | ... | ... | 0 | 0 | 0 | 75 | 652 | 163 | 0 | 0 | 75 | 652 | 163 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Hides ... ... ... ... | ... | ... | 0 | 0 | 0 | 10 | 44 | 11 | 0 | 0 | 10 | 44 | 11 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Indigo ... ... ...... | 2 | 9 | 2 | 4 | 0 | 1 | 5 | 1 | 4 | 0 | ... | ... | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | |
| Jungle sticks ... ... | 3 | 28 | 7 | 0 | 0 | 7 | 62 | 15 | 8 | 0 | 4 | 34 | 8 | 8 | 0 | ... | ... | 0 | 0 | 0 | |
| Jaggery ... ... ... | 2 | 7 | 1 | 12 | 0 | ... | ... | 0 | 0 | 0 | ... | .. | 0 | 0 | 0 | 2 | 7 | 1 | 12 | 0 | |
| Luggage ... ... ...... | 78 | 106 | 26 | 3 | 0 | 44 | 76 | 19 | 0 | 0 | ... | ... | 0 | 0 | 0 | 34 | 30 | 7 | 8 | 0 | |
| Lemons ... ... ... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Mats... ... ... ...... | 1 | 3 | 0 | 12 | 0 | 5 | 42 | 10 | 8 | 0 | 4 | 39 | 9 | 12 | 0 | ... | ... | 0 | 0 | 0 | |
| Mangoes ... ... ... | 4 | 16 | 4 | 0 | 0 | 2 | 6 | 1 | 8 | 0 | ... | ... | 0 | 0 | 0 | 2 | 10 | 2 | 8 | 0 | |
| Money or Coins .. ...... | 8 | 205 | 51 | 4 | 0 | 6 | 85 | 21 | 4 | 0 | ... | ... | 0 | 0 | 0 | 2 | 120 | 30 | 0 | 0 | |
| Material ... ... ... | ... | ... | 0 | 0 | 0 | 2 | 8 | 2 | 0 | 0 | 2 | 8 | 2 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Oysters ... ... ...... | 5 | 20 | 5 | 0 | 0 | 2 | 8 | 2 | 0 | 0 | ... | ... | 0 | 0 | 0 | 3 | 12 | 3 | 0 | 0 | |
| Onions ... .. ... ... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Oranges ... ... ...... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Piece goods ... ... ... | 29 | 127 | 31 | 12 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 29 | 127 | 31 | 12 | 0 | |
| Passengers ... ...... | 2,841 | 2,944 | 736 | 0 | 0 | 2,618 | 2,701 | 675 | 4 | 0 | ... | ... | 0 | 0 | 0 | 223 | 243 | 60 | 12 | 0 | |
| Paddy ... ... ... ... | 109 | 1,943 | 485 | 12 | 0 | 421 | 8,319 | 2,079 | 12 | 0 | 312 | 6,376 | 1,594 | 0 | 0 | .. | .. | 0 | 0 | 0 | |
| Palmyrah leaves ...... | 35 | 267 | 66 | 12 | 0 | 40 | 687 | 171 | 12 | 0 | 5 | 420 | 105 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Palankeens ... ... ... | 2 | 2 | 0 | 8 | 0 | 4 | 21 | 5 | 4 | 0 | 2 | 19 | 4 | 12 | 0 | ... | ... | 0 | 0 | 0 | |
| Planks ... ... ...... | ... | ... | 0 | 0 | 0 | 2 | 13 | 3 | 4 | 0 | 2 | 13 | 3 | 4 | 0 | ... | ... | 0 | 0 | 0 | |
| Plants .. ... ... ... | ... | ... | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 1 | 4 | 1 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Plantains ... ... ...... | 1 | 3 | 0 | 12 | 0 | .. | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 1 | 3 | 0 | 12 | 0 | |
| Redwood ... ... ... | 3 | 73 | 18 | 4 | 0 | 2 | 48 | 12 | 0 | 0 | ... | ... | 0 | 0 | 0 | 1 | 25 | 6 | 4 | 0 | |
| Rice ... ... ... ...... | 4 | 25 | 6 | 4 | 0 | 14 | 157 | 39 | 4 | 0 | 10 | 132 | 33 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Rafts of Timber ... ... | 1 | 2 | 0 | 8 | 0 | 45 | 148 | 37 | 0 | 0 | 44 | 146 | 36 | 8 | 0 | ... | ... | 0 | 0 | 0 | |
| Palmyrah ... ... ...... | ... | ... | 0 | 0 | 0 | 6 | 22 | 5 | 8 | 0 | 6 | 22 | 5 | 8 | 0 | ... | ... | 0 | 0 | 0 | |
| Rattan ... ... ... ... | 4 | 24 | 6 | 0 | 0 | 4 | 26 | 6 | 8 | 0 | ... | 2 | 0 | 8 | 0 | ... | ... | 0 | 0 | 0 | |
| Shells ... ... ...... | 1,669 | 24,973½ | 6,243 | 6 | 0 | 1,842 | 28,1[illegible]8 | 7,032 | 0 | 0 | 173 | 3,154½ | 788 | 10 | 0 | ... | ... | 0 | 0 | 0 | |
| Salt-fish ... ... ... | 205 | 816 | 204 | 0 | 0 | 239 | 956 | 239 | 0 | 0 | 34 | 140 | 35 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Salt ... ... ... ...... | 1,713 | 42,058 | 10,514 | 8 | 0 | 3,413 | 82,815 | 20,703 | 12 | 0 | 1,700 | 40,757 | 10,189 | 4 | 0 | ... | ... | 0 | 0 | 0 | |
| Sundries ... ... ... | 21 | 90 | 22 | 8 | 0 | 16 | 78 | 19 | 8 | 0 | ... | ... | 0 | 0 | 0 | 5 | 12 | 3 | 0 | 0 | |
| Straw ... ... ...... | 19 | 194 | 48 | 8 | 0 | 4 | 33 | 8 | 4 | 0 | ... | ... | 0 | 0 | 0 | 15 | 161 | 40 | 4 | 0 | |
| Saffron ... ... ... ... | .. | ... | 0 | 0 | 0 | 2 | 18 | 4 | 8 | 0 | 2 | 18 | 4 | 8 | 0 | ... | ... | 0 | 0 | 0 | |
| Sheep ... ... ...... | 9 | 61 | 15 | 4 | 0 | 2 | 12 | 3 | 0 | 0 | ... | ... | 0 | 0 | 0 | 7 | 49 | 12 | 4 | 0 | |
| Do. skins ... ... ... | 1 | 3 | 0 | 12 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | 1 | 3 | 0 | 12 | 0 | |
| Soap-nuts... ... ...... | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Sagoo... ... ... ... | 2 | 6 | 1 | 8 | 0 | 1 | 4 | 1 | 0 | 0 | ... | ... | 0 | 0 | 0 | 1 | 2 | 0 | 8 | 0 | |
| Tobacco ... ... ...... | 24 | 458 | 114 | 8 | 0 | 12 | 74 | 18 | 8 | 0 | ... | ... | 0 | 0 | 0 | 12 | 384 | 96 | 0 | 0 | |
| Teakwood ... ... ... | ... | ... | 0 | 0 | 0 | 2 | 8 | 2 | 0 | 0 | 2 | 8 | 2 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Tiles... ... ... ...... | 10 | 33 | 8 | 4 | 0 | 11 | 53 | 13 | 4 | 0 | 1 | 20 | 5 | 0 | 0 | ... | ... | 0 | 0 | 0 | |
| Reapers ... ... ... | ... | ... | 0 | 0 | 0 | 1 | 7 | 1 | 12 | 0 | 1 | 7 | 1 | 12 | 0 | ... | ... | 0 | 0 | 0 | |
| Rope. . ... ... ...... | ... | ... | 0 | 0 | 0 | 1 | 5 | 1 | 4 | 0 | 1 | 5 | 1 | 4 | 0 | ... | ... | 0 | 0 | 0 | |
| Wood ... ... ... ... | 928 | 14,681¾ | 3,670 | 7 | 0 | 505 | 10,400 | 2,600 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 423 | 4,281½ | 1,070 | 7 | 0 | |
| Total .. | 9,930 | 1,27,183¼ | 31,795 | 13 | 0 | 11,218 | 1,72,383 | 43,095 | 12 | 0 | 2,476 | 52,616½ | 13,154 | 2 | 0 | 1,188 | 7,416¾ | 1,854 | 3 | 0 | |

TABLE C.

*Statement showing the number of Boats, Tonnage, and the amount of Toll collected on each sort of Goods which arrived at the Cochrane's Basin from each Village passing through the East Coast Canal, during the official year* 1860-61.

| Name of Villages. | Wood. Boats. | Wood. Tons. | Wood. Toll. RS. | A. | P. | Faggots. Boats. | Faggots. Tons. | Faggots. Toll. RS. | A. | P. | Shells. Boats. | Shells. Tons. | Shells. Toll. RS. | A. | P. | Salt. Boats. | Salt. Tons. | Salt. Toll. RS. | A. | P. | Grain. Boats. | Grain. Tons. | Grain. Toll. RS. | A. | P. | Miscellaneous Produce. Boats. | Misc. Tons. | Misc. Toll. RS. | A. | P. | Total number of Boats. | Their Tonnage. | Amount of Toll paid at Madras. RS. | A. | P. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Attiput | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 3 | 0 | 12 | 0 | 1,027 | 27,232 | 6,808 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,028 | 27,295 | 6,808 | 12 | 0 |
| Arimbackum | ... | ... | ... | ... | ... | 51 | 1,032 | 258 | 0 | 0 | 188 | 3,807 | 951 | 12 | 0 | ... | ... | ... | ... | ... | 18 | 287 | 59 | 4 | 0 | 25 | 131 | 32 | 12 | 0 | 282 | 5,207 | 1,301 | 12 | 0 |
| Bimarpalium | 4 | 52 | 13 | 0 | 0 | 93 | 1,674 | 418 | 8 | 0 | 95 | 2,634 | 658 | 8 | 0 | ... | ... | ... | ... | ... | 8 | 90 | 22 | 8 | 0 | 31 | 164 | 41 | 0 | 0 | 231 | 4,614 | 1,153 | 8 | 0 |
| Coromandel | 6 | 30 | 7 | 8 | 0 | 21 | 102 | 25 | 8 | 0 | 74 | 369 | 92 | 4 | 0 | ... | ... | ... | ... | ... | 2 | 10 | 2 | 8 | 0 | 62 | 216 | 54 | 0 | 0 | 165 | 727 | 181 | 12 | 0 |
| Cusba Streeharricottah | 113 | 2,600 | 650 | 0 | 0 | 354 | 9,278 | 2,319 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | 75 | 18 | 12 | 0 | 75 | 588 | 147 | 0 | 0 | 547 | 12,541 | 3,135 | 4 | 0 |
| Caringallie | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | 87 | 21 | 12 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 41 | 10 | 4 | 0 | 10 | 128 | 32 | 0 | 0 |
| Culloor | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 99 | 542 | 135 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 16 | 4 | 0 | 0 | 103 | 558 | 139 | 8 | 0 |
| Chunamcolum | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 29 | 392 | 98 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 12 | 23 | 5 | 12 | 0 | 41 | 415 | 103 | 12 | 0 |
| Calangy | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 52 | 190 | 47 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 38 | 9 | 8 | 0 | 54 | 228 | 57 | 0 | 0 |
| Cantoopully | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 5 | 1 | 4 | 0 | 2 | 45 | 11 | 4 | 0 | ... | ... | ... | ... | ... | 4 | 40 | 10 | 0 | 0 | 7 | 90 | 22 | 8 | 0 |
| Doogoorazpatam | 3 | 38 | 9 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 149 | 2,553 | 638 | 4 | 0 | 197 | 1,408 | 367 | 0 | 0 | 349 | 4,059 | 1,014 | 12 | 0 |
| Ennore | 24 | 69 | 17 | 4 | 0 | ... | ... | ... | ... | ... | 205 | 636 | 159 | 0 | 0 | 530 | 12,371 | 3,092 | 12 | 0 | 1 | 5 | 1 | 4 | 0 | 158 | 201 | 50 | 4 | 0 | 918 | 13,282 | 3,320 | 8 | 0 |
| Elloor | 106 | 2,525 | 631 | 4 | 0 | 147 | 3,790 | 947 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 99 | 2,247 | 561 | 12 | 0 | 8 | 100 | 25 | 0 | 0 | 360 | 8,662 | 2,165 | 8 | 0 |
| Elavore | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 150 | 2,552 | 638 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 14 | 3 | 8 | 0 | 152 | 2,566 | 641 | 8 | 0 |
| Eroockum | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 522 | 9,896 | 2,474 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 19 | 79 | 19 | 12 | 0 | 541 | 9,975 | 2,493 | 12 | 0 |
| Kooroovithittoo | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 96 | 1,963 | 490 | 12 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 96 | 1,963 | 490 | 12 | 0 |
| Kondoorpalium | 2 | 40 | 10 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 16 | 384 | 96 | 0 | 0 | 17 | 181 | 45 | 4 | 0 | 35 | 605 | 151 | 4 | 0 |
| Koongeely | ... | ... | ... | ... | ... | 22 | 496 | 124 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7 | 114 | 28 | 8 | 0 | 29 | 610 | 152 | 8 | 0 |
| Mathoopalium | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 38 | 554 | 138 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 38 | 554 | 138 | 8 | 0 |
| Mongodoo | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 15 | 3 | 12 | 0 | 8 | 28 | 7 | 0 | 0 | 11 | 43 | 10 | 12 | 0 |
| Moonapalium | ... | ... | ... | ... | ... | 3 | 15 | 3 | 12 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9 | 28 | 7 | 0 | 0 | 12 | 43 | 10 | 12 | 0 |
| Omah Samoodrum | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 25 | 159 | 39 | 12 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 25 | 159 | 39 | 12 | 0 |
| Pulicat | 2 | 10 | 2 | 8 | 0 | 5 | 22 | 5 | 8 | 0 | 45 | 224 | 56 | 0 | 0 | ... | ... | ... | ... | ... | 97 | 580 | 145 | 0 | 0 | 2,762 | 3,676 | 919 | 0 | 0 | 2,911 | 4,512 | 1,128 | 0 | 0 |
| Poozdevakum | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 450 | 9,927 | 2,481 | 12 | 0 | ... | ... | ... | ... | ... | 18 | 23 | 5 | 12 | 0 | 468 | 9,950 | 2,487 | 8 | 0 |
| Pumbily | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 23 | 5 | 12 | 0 | 4 | 23 | 5 | 12 | 0 |
| Poondy Coopum | 2 | 37 | 9 | 4 | 0 | 310 | 7,683 | 1,920 | 12 | 0 | 10 | 198 | 49 | 8 | 0 | ... | ... | ... | ... | ... | 7 | 128 | 32 | 0 | 0 | 17 | 81 | 20 | 4 | 0 | 346 | 8,127 | 2,031 | 12 | 0 |
| Paroovadoo | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 46 | 877 | 219 | 4 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 46 | 877 | 219 | 4 | 0 |
| Ramapoorum | ... | ... | ... | ... | ... | 4 | 71 | 17 | 12 | 0 | 126 | 2,474 | 618 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | 27 | 6 | 12 | 0 | 135 | 2,572 | 643 | 0 | 0 |
| Royadoorovoo Poondy | 7 | 192 | 48 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | 28 | 7 | 0 | 0 | 11 | 220 | 55 | 0 | 0 |
| Reddypalum | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 8 | 40 | 10 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 5 | 1 | 4 | 0 | 9 | 45 | 11 | 4 | 0 |
| Sadiencoopum | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 83 | 1,923 | 480 | 12 | 0 | 83 | 1,923 | 480 | 12 | 0 |
| Sherambore | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 0 | 4 | 0 | 1 | 1 | 0 | 4 | 0 |
| Thadacoopum | 133 | 2,619 | 654 | 12 | 0 | 203 | 4,824 | 1,206 | 0 | 0 | 24 | 526 | 131 | 8 | 0 | ... | ... | ... | ... | ... | 7 | 157 | 39 | 4 | 0 | 78 | 784 | 196 | 0 | 0 | 445 | 8,910 | 2,227 | 8 | 0 |
| Thittoopettay | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 48 | 12 | 0 | 0 | 3 | 48 | 12 | 0 | 0 |
| Vullore | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,002 | 24,722 | 6,180 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,002 | 24,722 | 6,180 | 8 | 0 |
| Voyalore | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 402 | 8,518 | 2,129 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 402 | 8,518 | 2,129 | 8 | 0 |
| Vanadoo | ... | ... | ... | ... | ... | 4 | 108 | 27 | 0 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 11 | 2 | 12 | 0 | 7 | 119 | 29 | 12 | 0 |
| Yelyalavakum | 103 | 2,188 | 547 | 0 | 0 | 96 | 2,590 | 647 | 8 | 0 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 98 | 2,647 | 66 | 12 | 0 | 14 | 127 | 31 | 12 | 0 | 311 | 7,552 | 1,888 | 0 | 0 |
| Total | 505 | 10,400 | 2,600 | 0 | 0 | 1,318 | 31,685 | 7,921 | 4 | 0 | 1,842 | 28,128 | 7,032 | 0 | 0 | 3,413 | 82,815 | 20,708 | 12 | 0 | 510 | 9,128 | 2,282 | 0 | 0 | 3,635 | 10,227 | 2,556 | 12 | 0 | 11,218 | 1,72,383 | 43,095 | 12 | 0 |

TABLE D.

*List of Boats which carry Produce on the Northern branch of the East Coast Canal.*

| Tonnage of Boats. | Number of Boats of each kind. | Total Tonnage of each kind. | Increase in the official year 1860-61. | | REMARKS. |
|---|---|---|---|---|---|
| | | | Boats. | Tons. | |
| I | 185 | 185 | 32 | 32 | 58 Boats of one ton were transferred to the Southern Canal—159 remaining. |
| II | 6 | 12 | ... | ... | |
| III | 18 | 54 | 2 | 6 | |
| IV | 11 | 44 | 5 | 20 | |
| V | 16 | 80 | ... | ... | |
| VI | 10 | 60 | 2 | 12 | |
| VII | 17 | 119 | ... | ... | |
| VIII | 3 | 24 | 3 | 24 | |
| IX | 6 | 54 | 1 | 9 | |
| X | 4 | 40 | .. | ... | |
| XI | 4 | 44 | 1 | 11 | |
| XII | 3 | 36 | 1 | 12 | |
| XIII | 5 | 65 | 1 | 13 | |
| XIV | 6 | 84 | 6 | 84 | |
| XV | 9 | 135 | ... | ... | |
| XVI | 35 | 560 | 3 | 48 | |
| XVII | 17 | 289 | 1 | 17 | |
| XVIII | 30 | 540 | 1 | 18 | 2 Boats of 18 tons were broken—30 remaining. |
| XIX | 37 | 703 | ... | ... | 1 do. of 19 do. was do. 36 do. |
| XX | 24 | 480 | .. | ... | |
| XXI | 24 | 504 | 4 | 84 | 1 Boat of 21 tons was broken—27 remaining. |
| XXII | 17 | 374 | 1 | 22 | |
| XXIII | 25 | 575 | 1 | 23 | |
| XXIV | 15 | 360 | 3 | 72 | |
| XXV | 16 | 400 | 1 | 25 | |
| XXVI | 37 | 962 | 3 | 78 | 1 Boat of 26 tons was broken—39 remaining. |
| XXVII | 28 | 756 | 1 | 27 | |
| XXVIII | 22 | 616 | 3 | 84 | |
| XXIX | 20 | 580 | ... | ... | |
| XXX | 12 | 360 | 3 | 90 | |
| XXXI | 4 | 124 | 1 | 31 | |
| XXXII | 8 | 256 | ... | ... | |
| XXXIII | 4 | 132 | 1 | 33 | |
| XXXIV | ... | ... | ... | ... | |
| XXXV | 1 | 35 | ... | ... | |
| Total... | 679 | 9,642 | 81 | 875 | |

## TABLE E.

*Detailed Accounts of the Receipts and Disbursements during the year* 1860-61.

### Receipts.

| Months. | Miscellaneous Produce. | | | Salt. | | | Total. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number of Boats. | Their Tonnage. | Toll levied. | Number of Boats. | Their Tonnage. | Toll levied. | Number of Boats. | Their Tonnage. | Toll levied at 4 Annas per ton. |
| 1860, May....... | 746 | 8,517 | 2,129¼ | 569 | 13,438 | 3,359½ | 1,285 | 21,955 | 5,488¾ |
| June........ | 601 | 6,592 | 1,648 | 521 | 13,098 | 3,274½ | 1,122 | 19,690 | 4,922½ |
| July........ | 496 | 4,718 | 1,179½ | 240 | 6,125 | 1,531¼ | 736 | 10,843 | 2,710¾ |
| August..... | 625 | 6,707 | 1,676¾ | 184 | 4,065 | 1,016¼ | 809 | 10,772 | 2,693 |
| September | 743 | 8,953 | 2,238¼ | 444 | 10,608 | 2,652 | 1,187 | 19,561 | 4,890¼ |
| October.... | 579 | 6,541 | 1,635¼ | 354 | 8,520 | 2,130 | 933 | 15,061 | 3,765¼ |
| November. | 562 | 7,704 | 1,926 | 252 | 6,084 | 1,521 | 814 | 13,788 | 3,447 |
| December. | 754 | 9,754 | 2,438½ | 65 | 1,412 | 353 | 819 | 11,166 | 2,791½ |
| 1861, January... | 644 | 7,683 | 1,920¾ | 143 | 3,283 | 820¾ | 787 | 10,966 | 2,741½ |
| February.. | 539 | 6,558 | 1,639½ | 38 | 622 | 155½ | 577 | 7,180 | 1,795 |
| March...... | 583 | 7,519 | 1,879¾ | 83 | 1,786 | 446½ | 666 | 9,305 | 2,326¼ |
| April...... | 932 | 8,322 | 2,080½ | 550 | 13,774 | 3,443½ | 1,483 | 22,096 | 5,524 |
| Total...... | 7,805 | 89,568 | 22,392 | 3,413 | 82,815 | 20,703¾ | 11,218 | 1,72,383 | 43,095¾ |

### Expenditure.

| Months. | Toll Office. | | Lock. | | Ordinary Repairs for the Northern Canal. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|
| | Establishment. | Contingent. | Establishment. | Contingent. | | | |
| 1860, May ... | 167 0 0 | 2 10 0 | 37 0 0 | 1 9 6 | Ordinary Repairs.................. Rs. 5,094-14-2<br>Cochrane's Canal Improvement Estimate.. ,, 12,000-0-0 | | |
| June.... | 167 0 0 | 2 10 0 | 37 0 0 | 1 8 6 | | | |
| July.... | 167 0 0 | 2 10 0 | 37 0 0 | 1 8 6 | | | |
| August. | 167 0 0 | 2 10 0 | 37 0 0 | 1 8 6 | | | |
| Sept .. | 165 3 7 | 2 10 0 | 37 0 0 | 1 8 6 | | | |
| Oct...... | 163 10 8 | 2 10 0 | 37 0 0 | 1 8 6 | | | |
| Nov...... | 167 0 0 | 9 15 0 | 37 0 0 | 1 8 6 | | | |
| Dec...... | 167 0 0 | 2 10 0 | 37 0 0 | 1 8 6 | | | |
| 1861, Jan...... | 167 0 0 | 3 10 0 | 37 0 0 | 1 8 6 | | | |
| Feb...... | 167 0 0 | 4 8 0 | 37 0 0 | 1 8 6 | | | |
| March.. | 165 1 0 | 4 4 0 | 37 0 0 | 1 8 6 | | | |
| April.... | 167 0 0 | 12 3 3 | 37 0 0 | 1 8 6 | | | |
| Total...... | 1996 15 3 | 55 8 3 | 444 0 0 | 18 7 0 | 17,095 | 19,609 | |

## TABLE F.

*Statement of the Traffic showing the number of Boats and Rafts passing through the East Coast Canal during the official year* 1860-61.

| Months. | Grain. | | Other Agricultural Produce. | | Salt. | | Lime and Shell chunam. | | Firewood. | | Other Goods. | | | | | | | | Rafts of Timber. | | Rafts of Bamboo. | | Total Rafts. | | Total value of Goods. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | Boats. | Value. | Empty Boats. | Total. | Passenger Boats. | Paddle Boats. | Total. | Grand Total No. of Boats. | No. | Value. | No. | Value. | No. | Value. | |
| 1860, May | 110 | 81,506 | 9 | 10,868 | 539 | 2,72,160 | 204 | 7,600 | 140 | 12,467 | 47 | 5,112 | 2 | 1,051 | 234 | 0 | 234 | 1,285 | 0 | 0 | 0 | 0 | 0 | 0 | 3,89,713 |
| June | 22 | 20,300 | 13 | 26,120 | 521 | 2,65,275 | 158 | 6,000 | 123 | 10,234 | 58 | 5,688 | 8 | 903 | 218 | 0 | 218 | 1,121 | 1 | 175 | 0 | 0 | 1 | 175 | 3,32,792 |
| July | 17 | 12,075 | 16 | 33,120 | 240 | 1,24,065 | 87 | 3,280 | 117 | 8,750 | 67 | 4,184 | 1 | 545 | 191 | 0 | 191 | 736 | 0 | 0 | 0 | 0 | 0 | 0 | 1,85,474 |
| August | 34 | 30,712 | 19 | 34,400 | 184 | 82,350 | 168 | 4,200 | 137 | 4,032 | 95 | 7,584 | 2 | 639 | 170 | 0 | 170 | 809 | 0 | 0 | 0 | 0 | 0 | 0 | 1,63,278 |
| September | 60 | 54,075 | 24 | 44,480 | 444 | 2,14,785 | 203 | 6,570 | 158 | 4,823 | 73 | 5,052 | 0 | 962 | 182 | 0 | 182 | 1,144 | 43 | 3,762 | 0 | 0 | 43 | 3,762 | 3,33,547 |
| October | 34 | 19,775 | 19 | 35,200 | 354 | 1,72,530 | 156 | 4,990 | 137 | 3,871 | 68 | 6,240 | 1 | 769 | 164 | 0 | 164 | 933 | 0 | 0 | 0 | 0 | 0 | 0 | 2,42,606 |
| November | 43 | 25,900 | 23 | 46,880 | 252 | 1,23,182 | 65 | 2,030 | 210 | 7,119 | 52 | 3,228 | 3 | 657 | 157 | 0 | 157 | 814 | 0 | 0 | 0 | 0 | 0 | 0 | 2,08,339 |
| December | 98 | 70,875 | 15 | 26,080 | 65 | 28,620 | 122 | 4,280 | 212 | 6,818 | 61 | 5,664 | 8 | 581 | 238 | 0 | 238 | 819 | 0 | 0 | 0 | 0 | 0 | 0 | 1,42,387 |
| 1861, January | 39 | 32,375 | 19 | 47,040 | 143 | 66,482 | 152 | 6,410 | 142 | 4,347 | 44 | 3,600 | 3 | 542 | 245 | 0 | 245 | 787 | 0 | 0 | 0 | 0 | 0 | 0 | 1,60,254 |
| February | 26 | 10,710 | 5 | 9,120 | 38 | 12,555 | 130 | 4,440 | 142 | 4,564 | 60 | 5,004 | 0 | 401 | 176 | 0 | 176 | 577 | 0 | 0 | 0 | 0 | 0 | 0 | 46,393 |
| March | 14 | 8,750 | 1 | 1,280 | 83 | 35,640 | 171 | 6,540 | 153 | 4,970 | 48 | 5,520 | 3 | 473 | 193 | 0 | 193 | 666 | 0 | 0 | 0 | 0 | 0 | 0 | 62,700 |
| April | 13 | 8,700 | 5 | 7,680 | 550 | 2,78,910 | 226 | 8,560 | 138 | 4,200 | 50 | 7,488 | 50 | 1,032 | 450 | 0 | 450 | 1,482 | 1 | 87 | 0 | 0 | 1 | 87 | 3,15,625 |
| Total | 510 | 3,75,753 | 168 | 3,12,268 | 3,413 | 16,76,554 | 1,842 | 64,900 | 1,818 | 76,195 | 723 | 64,364 | 81 | 8,555 | 2,618 | 0 | 2,618 | 11,173 | 45 | 4,024 | 0 | 0 | 45 | 4,024 | 25,83,058 |

| | *Value of Goods.* |
|---|---|
| In 1859-60 | 12,95,658 |
| ,, 1860-61 | 25,83,058 |

TABLE G.

*the number of Boats and their Tonnage with particulars of different sorts of Articles which arrived at the Wooden Bridge from the different Villages lying adjacent to the Sadras Canal during the official year 1*

| Aulumbarah. | | Cuddalore. | | Carany. | | Charicatoocoopum. | | Catoocoopum. | | Coovattoor. | | Covelong. | | Keelakanee. | | Mooneapilly Savady. | | Mootakarun Choultry. | | Moottookadoo. | | Nemmaly. | | Nyllattoor. | | Panyoor. | | Padoovoor. | | Pianoor. | | Puttipalum. | | Poonjaree. | | Sadras. | | Seven-Pagodas. | | Tiroovadunday. | | Tripolore. | | Ummanumpaukum. | | Vanien Choultry. | | Vambanoor. | | Vitlapoorum. | | Yadayoor. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. | Boats. | Tons. |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | | | | | | | | | | | | | | | | 2 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 | 60 | | | | | | | | | | | | | 7 | 17½ | | | 31 | 77½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2½ | | | | | | | 2 | 5 | | | | | | | | | | | | | | | | | 3 | 7½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2½ | | | | | | | | | | | | | | | | | 1 | 2½ |
| | | | | | | | | | | | | 8 | 20 | | | | | | | | | | | | | | | | | | | | | | | | | 89 | 222½ | | | | | | | | | | | | | | | 97 | 242½ |
| | | | | | | | | | | | | | | 3 | 7½ | | | | | | | | | | | | | | | | | | | | | 6 | 15 | 1 | 2½ | | | 1 | 2½ | | | 3 | 7½ | | | | | 1 | 2½ | 15 | 37½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2½ | | | | | | | | | | | | | | | | | 1 | 2½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | | | | | | 2 | 5 |
| 32 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | 15 | | | | | | | | | | 11 | 27½ | | | | | | | | | | | 4 | | | | | | 63 | 27½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 12½ | | | | | | | | | | | | | | | | | 5 | 12½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 7½ | | | | | | | | | | | | | 1 | 2½ | | | 4 | 10 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | | | | | | | | | | | | | | | | 2 | 5 |
| | | | | | | | | | | | | | | 5 | 12½ | | | | | 1 | 2½ | 21 | 52½ | | | | | | | *38 | 565 | | | 1 | 2½ | 97 | 242½ | | | | | 11 | 27½ | 1 | 2½ | 13 | 32½ | | | | | | | 188 | 940 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 35 | 87½ | | | | | 1 | 2½ | 1 | 2½ | 2 | | | | | | | | 39 | 97½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 10 | | | | | | | | | | | | | | | | | 4 | 10 |
| | | 1 | 2½ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | | | | | | | | | | | | | | | | 2 | 5 |
| | | | | | | | | | | | | 1 | 2½ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2½ | | | 2 | 5 | | | | | | | 3 | 7½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2½ | | | | | | | | | | | | | | | | | 1 | 2½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 | 20 | 1 | 2½ | | | | | | | | | | | | | | | 9 | 22½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | | | | | | | | | | | | | | | | 2 | 5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 29 | 72½ | | | | | | | | | | | | | | | | | 29 | 72½ |
| | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | | | | | | | | | | | | | | | | | | | | | | 3 | 7½ | | | | | | | 5 | 12½ |
| | | | | | | | | | | | | 122 | 122 | 1 | 1 | | | 1 | 1 | | | | | | | | | | | | | | | | | 408 | 408 | 18 | 18 | | | 12 | 12 | | | 1109 | 1109 | | | 1 | 1 | | | 1,672 | 1,672 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 | | | 1 | 2½ | | | | | | | | | | | | | 3 | 7½ |
| | | | | | | | | | | 1 | 2½ | | | 1 | 2½ | | | | | | | | | 3 | 7½ | | | | | 1 | 2½ | | | | | 76 | 190 | 1 | 2½ | | | 1 | 2½ | | | 5 | 12½ | | | 5 | 12½ | | | 94 | 235 |
| | | | | | | 1 | 2½ | 3 | 3½ | | | 12 | 30 | | | | | | | 1 | 2½ | | | | | 1 | 2½ | | | | | 3 | 7½ | | | 90 | 225 | 1 | 2½ | | | 1 | 2½ | | | 2 | 5 | | | | | | | 115 | 287½ |
| | | | | | | | | | | | | 42 | 105 | | | | | | | | | | | | | | | | | | | | | | | 19 | 47½ | | | | | | | | | | | | | | | | | 61 | 152½ |
| | | | | | | | | | | | | 10 | 25 | | | | | | | | | | | | | | | | | 1 | 2½ | | | | | 24 | 60 | 1 | 2½ | | | | | | | 3 | 7½ | | | 1 | 2½ | | | 40 | 100 |
| | | | | 3 | 7½ | | | | | | | 1 | 2½ | | | | | | | | | | | | | | | | | | | | | | | 8 | 20 | | | | | 2 | 5 | | | 3 | 7½ | | | | | | | 17 | 42½ |
| | | | | | | | | | | | | | | | | | | | | 1 | 2½ | | | | | | | | | | | | | | | 4 | 10 | | | | | | | | | | | | | | | | | 5 | 12½ |
| | | | | | | | | | | | | 7 | 17½ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 7 | 17½ |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 12½ | | | | | | | | | | | | | | | | | 5 | 12½ |

| | Boats. | Tons. |
|---|---|---|
| Total.... | 2,529 | 4,154½ |
| Add for 52 Masoolah boats at 3 tons each...... | .. | 156 |
| Total.... | .. | 4,310½ |

*Note.*—As the traffic is all carried on by one-ton passenger boats with one exception. Such boats carrying cargo have been averaged in this Return at 2½ tons. The exception is a cargo boat of 26 tons as per note in last column.

| | Boats. | Tonnage. |
|---|---|---|
| 1859-60 ... | 1,439 | 2,642 |
| 1860-61 .... | 2,529 | 4,310½ |

NORTH ARCOT.

163. The sum set apart in the Budget for this District amounted to Rupees 2,11,832, subsequently modified to Rupees 1,64,735, of which Rupees 1,61,376 were expended as follows :—

| | New Works. | Repairs. |
|---|---|---|
| | RS. | RS. |
| Irrigation ... ... | 5,895 | 64,596 |
| Communications ... ... | 34,277 | 47,142 |
| Buildings ... ... | ... | 9,466 |
| Total Rupees.. | 40,172 | 1,21,204 |

being Rupees 28,066 in excess of the outlay of 1859-60.

164. The Department has chiefly been engaged in the execution of repairs. Of new works under the head of Irrigation, the largest expenditure has been in connection with the Palar annicut, on which Rupees 3,267 have been spent in carrying out the subsidiary channels on the south bank of the river. Owing to the dryness of the season, the excavation of these channels was attended with much difficulty, the soil being so hard as to entail excessive labor in its removal. Efforts are being made to hasten its progress and it is expected that the work of the first three sections on the south or right bank of the river will be finished before the freshes of the next monsoon come down the river.

165. As regards Communications, the following were the principal works in hand :—

1st. Road from Companypett to Conjeveram.
2nd. Do. Vellore to Arnee.
3rd. Do. Arcot to do.
4th. Bridge over the Palar near Vellore.

166. On the first work the expenditure has been Rupees 10,998. It is now opened for traffic, and the masonry works only remain to be built. At the second road the outlay was Rupees 12,344, for which the line has been completed up to the 21st mile-stone from Vellore ; but the culverts are still unfinished. The third road has been traced, and some of the worst portions of the old bandy track, over which the new line runs, improved at a cost of Rupees 5,145. At the Palar bridge the plastering has been finished. The total expenditure on this work amounts to Rupees 1,28,570, of which the plastering and other work done during the past year cost Rupees 5,563.

167. As respects repairs to Irrigation works, 196 tanks and channels have been put in order at an expense of Rupees 63,854. Of the former, the principal were the Vanapady, Kaununtangle and Sholinghur tanks. Those required to the Poinay and Cheyaur annicuts have also been attended to, and both works are now in good working order.

168. Of Communications, 250 miles of road have been repaired with an expenditure of Rupees 47,746, and the Trunk Roads have been kept in excellent condition, though, notwithstanding the proximity of the Railway to two of them, the heavy traffic continues, and frequent repairs are in consequence required. Upwards of 200 miles of District roads have also been improved at a cost of 57,000 Rupees from the local funds : one of these roads so improved, viz., that between Chittoor, Poinay and Sholinghur has proved of great use to the people.

169. The repairs to buildings consisted chiefly of improvements to the lower Barracks at Arcot, the cost of which was Rupees 4,967.

170. The rates of labor and prices of material remain the same as in 1859-60, for although the demand for labor by the Railway authorities has diminished, the workmen, bricklayers in particular, prefer moving on to stations higher up the line where their services may be required, to abiding in their own District, owing doubtless to the higher rates of pay which they thereby obtain for their services.

171. Cholera prevailed to a considerable extent throughout the District during the past year, and one of the upper and two of the lower subordinates of the Departments were carried off by it.

SOUTH ARCOT.

172. The funds placed at the disposal of the District Engineer of this District in the Budget amounted to Rupees 1,68,087, subsequently reduced to Rupees 1,31,533, in the revised allotments of September and November 1860 ; but afterwards augmented to Rupees 1,61,533 by the transfer of Rupees 30,000 from the Kistnah District.

173. The expenditure has been Rupees 1,50,484, viz. :—

| | *New Works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation ... ... | 31,249 ... | 55,769 |
| Communications ... ... | 10,555 ... | 51,220 |
| Buildings ... ... | 50 ... | 1,641 |
| Total Rupees... | 41,854 | 1,08,630 |

174. The only important new work of Irrigation undertaken has been the Pooniaur annicut; up to the end of April 1861, all the head sluices in the south bank were built, also all the bridges, with the exception of that over the Ragaven channel, which is in progress, and the annicut has been constructed to the first set of under-sluices, and wells are being sunk for the second section. At the commencement of the work some delay occurred in obtaining a sufficiency of material, but since then the progress has been very satisfactory. The expenditure was Rupees 21,180 out of an Estimate of Rupees 61,000.

175. Of Communications, the only new work was the metalling of Trunk Road No. 8. The quantity of gravel laid down extended over 29 miles, the cost of which amounted to Rupees 10,485, and the total expense attending the improvements of the line amounts to Rupees 14,973.

176. The expenditure on repairs to Irrigation works has been Rupees 65,906 inclusive of Rupees 10,137 for minor new works, and with this amount several very useful works, such as sluices, calingulahs, aqueducts and repairs to tanks and river banks have been carried out, the chief of which were repairs to the Veranum tank, and to the Vadavaur Manavoikal and Coleroon banks.

177. Nearly all these repairs, as well as the digging and carting of gravel for roads, have been done by contract; advances have been given only in a few instances, and in several of the Taluqs none whatever were made, a circumstance exceedingly satisfactory, as the practice of giving advances has heretofore caused great loss. The Trunk Roads have been maintained in as good condition as the annual allowance would admit of. The Trichinopoly line is the only one finished, and its maintenance allowance is applied solely to the removal of the surface and to ordinary repairs. All the other roads are incomplete in some respect as regards metalling, bridges, avenues, &c., and it is therefore difficult to keep them in a satisfactory condition with the sum sanctioned for the purpose. They have, however, been greatly improved within the last five years.

178. The minor roads are all kept in repair from the local funds. The expenditure on them during the past year was Rupees 59,724, and for this sum forty-eight different lines, 194 miles in length, together with several useful masonry works, such as small bridges and tunnels, have been repaired and built.

179. The repairs to Buildings call for no remark.

180. Little assistance has been rendered by the Ryots in furnishing material or labor for the execution of repairs to their works of irrigation, and anxious as they always seem to get estimates sanctioned, they do not generally bestir themselves to aid the Overseer when the works for their benefit are actually commenced.

181. The season of 1860-61 has not been on the whole a favorable one for the District. The fall of rain was below the average, and the tanks in the western part received a very inadequate supply. Those, however, fed by river channels fared better; and the freshes in the Coleroon of December 1860 saved the crops in the large and important Taluq of Chettumbrum.

## TANJORE.

182. The Budget allotment for this District was Rupees 3,28,972. This sum was reduced in September to Rupees 2,88,320, to which was afterwards added 15,000 Rupees from Cuddapah, making the total amount available for expenditure Rupees 3,03,320, of which Rupees 2,88,347 were laid out in the following manner :—

| | *New Works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation ... ... | 13,472 ... | 1,57,478 |
| Communications ... ... | 14,725 ... | 86,482 |
| Buildings ... ... | 294 ... | 15,896 |
| Total Rupees... | 28,491 | 2,59,856 |

being Rupees 3,66,603 less than the expenditure in 1859-60. With which, however, no fair comparison can be made, as the large outlay in that year was caused by the extensive damage done by the hurricane and storms in October and November 1858, and again in 1859; but if compared with the outlay* in 1857-58, the expenditure in the past year shows an excess of Rupees 65,727.

* Rupees 2,22,619.

183. The only important project in irrigation which has been carried out is that for the drainage of the Tulnoyer Cotagum, the expenditure on which amounts to Rupees 1,676. As was the case in 1859-60, Cholera broke out amongst the coolies shortly after the operations of the season commenced, and caused them to disperse. Comparatively little was therefore done towards the completion of the works, the collecting of the coolies together again having been very difficult. Heavy rain in April also put a stop to the repairs of the embankment, and delayed the progress of the masonry works.

184. The extent of land taken up for cultivation both within and without the Cotagum is steadily increasing. Last year it was 6,011 acres, as compared with 4,898 and 3,431 acres in the two previous years, and a much larger increase will, it is anticipated, take place in 1861-62.

185. The other irrigation works of importance in progress were the re-construction of sluices for the South Rajah Voikal Surplus, and for the Vanar Odapu in the north bank of the Rajah Voikal, the outlay attending which has been Rupees 2,765.

186. But few large masonry works were carried out in connection with communications. Those on which the greatest expenditure was incurred were the bridges over the Coleroon between Chettumbrum and Sheally, across the Maniyar on Road No. 2, and over the Codamoorty, on District Road No. 36. At the first work, which has been completed, it amounted to Rupees 3,144, and at the two latter to Rupees 2,935 for the collection of materials.

187. Many minor improvements have been executed in the rivers and channels, but owing to the reduction of 18 per cent. of the sum originally sanctioned for expenditure on repairs, several works, for which estimates had been authorized, were necessarily postponed.

188. Extensive repairs have been carried out to the jetty at Negapatam, and to the lower annicut; and on repairs to roads, Rupees 64,096 have been spent in restoring those which had suffered most severely from the storms and floods of 1858 and 1859, and which are expected to become eventually important feeders to the railway. A branch road has further been made from the Salt Depôt at Trivenkaud to Tranquebar, and the bridge across the river at Vellagunny is finished.

189. The demand for labor and materials at the railway works has been considerable, and the prices of both have, in consequence, been much increased in every part of the District. At Negapatam they have risen 100 per cent., and at other stations the rates for masonry have advanced from 10 to 15 per cent.

190. The assistance rendered by the Meerassidars and other influential persons has not been such as was desired, owing partly to the recurring rumours that the execution of Public Works was to be re-transferred to the Revenue Department, and partly as alleged by the District Engineer to the complaint of the members of the Public Works Department not being properly attended to.

191. During the past year the freshes in the river were rather below the level of those of previous years, and excepting a few trifling breaches near the coast, no injury has been done to the banks of the channels.

TRICHINOPOLY.

192. The amount entered in the Budget for this District, Rupees 2,26,251, was afterwards reduced to Rupees 2,08,503, and of this sum Rupees 1,72,958 were expended as follows, viz. :—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation | 13,528 | 88,356 |
| Communications | 32,123 | 26,824 |
| Buildings | 8,919 | 3,208 |
| Total Rupees... | 54,570 | 1,18,388 |

but in addition to this outlay a further sum of Rupees 26,070, being the amount of outstanding balances of previous years, was worked out and settled, so that the actual value of work performed during the year is Rupees 1,99,028.

193. Of Irrigation "New works" the principal were

1st.—The Ponairy Project.

2nd.—The re-construction of the Nat Voikal Head Sluice.

3rd.—The improvements to the Rutnagudi Annicut.

4th.—The improvements to the Peroovaly Channel.

194. On the Ponairy project the expenditure, Rupees 7,984, has not been so great as was anticipated, owing partly to the difficulty of procuring labor and materials, and partly to the necessity of confining operations to building the under tunnel and head sluice. The occurrence of heavy rain also caused much delay, but notwithstanding, sufficient progress has been made to warrant the hope that within a few months the works will be so far advanced as to allow of water being admitted into the channel for the irrigation of land expected to produce a revenue of 18,000 Rupees per annum.

195. The Nat Voikal head sluice, on which Rupees 1,935 has been laid out, was completed in June 1860, but in the following month heavy freshes severely injured it, and rendered extensive repairs necessary, which are now nearly finished.

196. At the Rutnagudi annicut the expenditure amounts to Rupees 2,217, for which a set of sluices in the south bank have been completed, and materials for those on the north side collected.

197. The improvements to the Peroovaly channel have not made much progress, in consequence of water being required from the channel for irrigation up to a late date; but arrangements have been made for the early completion of the work. The expense already incurred is only Rupees 556.

198. Under the head of Communications, the chief expenditure has been on the road from Trichinopoly to Coimbatore where it amounted to Rupees 13,586. On this line all the masonry works but one have been built, 19 miles of road gravelled, and fair progress made with the remainder.

199. Trunk Road No. 8 has also been improved at a cost of Rupees 7,319, and the road from Trichinopoly to Salem metalled in parts, at an additional outlay of Rupees 4,670. Three bridges have further been in progress during the year over the Kulyar, Codamurty and Iyaur rivers.

200. With regard to buildings, the improvements to the European Infantry Barracks and the erection of a new ward for females to the Hospital attached to it where the only works of note carried out.

201. The expenditure on repairs to Irrigation works was incurred chiefly in strengthening embankments and clearing channels to secure the existing revenue.

202. Two hundred miles of road, including 40 of Trunk road, have been repaired, and the whole of the roads in the District are represented to be now in good order, excepting that from Trichinopoly to Dindigul, and from Coilputty to the boundaries of the Madura District, and for these an annual maintenance allowance has recently been sanctioned.

203. In some parts of the District efforts have been made with success to check the system of giving advances to Contractors, and as the influence of the members of the Department increases, it is hoped that all the large works, as well as the repairs to irrigation works, will be executed without advances.

## MADURA.

204. The reduced allotment for this District amounted to Rupees 1,14,905, or Rupees 14,235 less than that entered in the Budget; but of this sum not more than Rupees 79,514 were, from one cause and another, availed of, the expenditure having been

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation............ | ...... | 36,903 |
| Communications............ | 20,109 | 10,464 |
| Buildings............ | 8,753 | 3,285 |
| Total Rupees... | 28,862 | 50,652 |

205. No new works of irrigation were carried out, and of those in progress under the head of Communications, the chief were the improvements to Trunk Road No. 4 from Trichinopoly to Madura and Tinnevelly, and the removal of the inner angle of the reef channel at Paumbem.

206. Owing to the lateness of the season when the first work was commenced, the expenditure thereon only amounted to Rupees 12,030, or about one-third of the sum allotted for the purpose; but since October last the improvements have been carried on vigorously, and upwards of 20 miles of road metalled, and the earth-work of about 8¼ miles more raised and levelled.

207. At the Paumbem reef channel the outlay has been Rupees 4,655 for blasting and removing rock, but very little could be done towards the improvements of the sand-bank channel, in consequence of the Steam Dredge having returned from Jaffna in a very dilapidated condition, requiring extensive repairs. It will therefore take some time before the vessel can be got ready for use again.

208. The average depth of water in the channel is eleven feet, and the traffic is stated to have been 2,447 vessels having an aggregate tonnage of 2,05,529 tons against 1,46,565 tons in 1859-60, and yeilding a revenue to Government of Rupees 13,535, which, if compared with that of 1859-60, shows an increase of Rupees 3,300 during the year under review, viz.:—

| | *No. of Vessels.* | *Tonnage.* | *Revenue.* |
|---|---|---|---|
| | | | RS. |
| In 1859-60.................. | 1,914 | 1,46,565 | 10,235 |
| „ 1860-61.................. | 2,447 | 2,05,529 | 13,535 |
| Increase... | 533 | 58,964 | 3,300 |

209. The increased height to the Light House has been found of great benefit, but a few screw pile beams would be of much service in the navigation of the channel. A Steam Tug has lately been received from England, and is now being put together at Dowlaishweram for use at Paumbem.

210. On Buildings, Rupees 6,213 have been spent in carrying out certain improvements to eleven Salt Platforms, the execution of which is represented to have been very unsatisfactory, and in future the District Engineer considers that it would be far better to allow such work to be done by the Salt Department.

211. Of repairs to Irrigation works, 135 tanks, 39 channels, 40 sluices, 9 calingulahs and 17 weirs were put in good order.

212. The outlay on repairs to roads, exclusive of that on Trunk Road No. 4 above adverted to, has been only Rupees 7,359, or a little less than one-fourth of the allowance sanctioned for the purpose, and averaging about 8 Rupees per mile per annum, on the 900 miles of principal roads in the District.

213. The roads are represented to be in all in a wretched condition, and many of them to be impassable, and every year that is allowed to pass without restoring them only adds to the difficulty of putting them in order again.

214. The Department Establishment in the District is much complained of by Captain Ryves who reports unfavourably of them as a body with one exception, viz., Assistant Overseer Palanayavali Mudali.

## TINNEVELLY.

215. The amount sanctioned for expenditure in this District was according to the Budget, Rupees 1,44,403. Upon the revision in November 1860 this was reduced to Rupees 97,797, to which was subsequently added Rupees 1,062 from the sum set apart for isolated works.

216. The expenditure has been Rupees 75,313, viz.:—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation.............. | 409 | 49,227 |
| Communications....... | 488 | 21,854 |
| Buildings.............. | 1,191 | 2,144 |
| Total Rupees... | 2,088 | 73,225 |

## Proceedings of the Madras Government, Public Works Department, 28th November 1861.

217. This outlay is upwards of 20,000 Rupees less than the sum placed at the disposal of the District Engineer owing to certain works suspended at the commencement of the year on the receipt of the Orders, reducing the allotment for repairs by 18 per cent., being such as could not be undertaken and completed at a later period, and to the difficulty experienced on account of unfavourable weather in obtaining, at the proper time, assistance from the Ryots. The several changes which necessarily took place in the executive charge of the District also tended to retard the operations of the Department, and the late season when the estimates for repairs to the roads were sanctioned further, is another reason why so little work was done.

218. With regard to new works, Rupees 409 have been expended in collecting materials for the proposed annicut across the Varellum river, and Rupees 320 in completing the approaches to the bridge over the Numbeaur. Some minor new works have also been executed to admit of the Carr cultivation being collected.

219. Of repairs to Irrigation works, 343 tanks and channels have been restored at a cost of Rupees 49,228. These repairs, however, have not been done so well as could be desired, the subordinates charged with the same, being with few exceptions very inefficient; but it is hoped that the apprentice system will eventually, to some extent, supply the want of lower subordinates.

220. Upon the several roads in the District, there has been an outlay of Rupees 20,829 in the maintenance of 62 miles, and in repairs of different bridges. The bad condition of these roads was brought to the notice of Government in December last, and sanction obtained for their repair at an estimated cost of Rupees 36,168. Since then, many improvements have been effected, but much more is required to be done before the roads can be considered as being in good order.

221. Besides the above, some useful works have been executed from the local funds, the principal of which were the construction of Bazaars in the Tinnevelly Pettah, and the erection of temporary buildings for the Pearl Fishery; but the cost of the latter, Rupees 4,000, was subsequently recovered from the proceeds of the Pearl Fishery.

222. The fall of the Ambur subscription bridge during a very heavy fresh, is the only instance of any very extensive damage occurring during the past year. Some tanks and channels were, however, breached in April last, the most important of which was the Wattrap Periacolum which burst its calingulah, flooded the country, and caused minor breaches in the tanks below it.

223. Owing to the large emigration of coolies to Ceylon and the extension of the Coffee plantations on the Western Ghats a considerable rise has taken place in the rates of labor, and it is difficult to procure it when wanted. As a remedy for this, efforts are being made to introduce the system of carrying out works on contract, and although immediate success is doubtful it is hoped that by steady perseverance a class of men will eventually be found willing to carry out the whole of the irrigation works in a Taluq, and to maintain a large number of laborers for service wherever required.

224. The minor repairs to tanks, channels, &c., are represented to be much neglected by the village authorities, notwithstanding the frequent issue of orders to them on the subject by the Collector. The channels also are often wilfully injured by the land owners owing, the District Engineer believes, to the insufficiency of the punishment inflicted on them when their proceedings are taken notice of by the authorities.

### COIMBATORE.

225. For this District, the revised allotment of funds was Rupees 1,66,233, or Rupees 2,622 in excess of the sum entered in the Budget. Subsequently this was increased to Rupees 1,97,233 by transfers from the Vizagapatam, Kurnool, and Presidency Districts, and of this amount Rupees 1,45,281 have been expended as follows :—

| | *New Works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation... ... ... | 5,174 | 37,133 |
| Communications... ... ... | 24,263 | 53,067 |
| Buildings... .. ... .. | 23,127 | 2,517 |
| Total Rupees... | 52,564 | 92,717 |

226. Of Irrigation new works, the only two in progress were the construction of groynes in the Cauvery at Vaungal for the preservation of the Nerur channel, and the formation of a new head to the Nungapugalur channel. On the former, the expenditure in 1860-61 has been Rupees 2,090, and on the latter Rupees 2,080. Both works were commenced in 1859, but owing to the neglect and supineness which prevailed in the District during the greater part of the year under review they are still incomplete.

227. The principal works of Communication undertaken were the following:—

| | | |
|---|---|---|
| Trace and improvements to the Coonoor Ghat... ... | Rupees. | 20,000 |
| Improvements to the Hassanur Ghat... ... ... | ,, | 1,756 |
| Constructing Road from Railway Station to Trunk Road No. 5 and the Town of Coimbatore... ... ... | ,, | 4,643 |
| Do. at Shomanur to Trunk Road No. 5 near Karoomunthanputty. ... ... ... ... | ,, | 1,729 |
| Do. from Parindoray to Railway Station... ... | ,, | 5,826 |
| Metalling Road and constructing Parapet walls between Coonoor, Wellington and Ootacamund... ... | ,, | 10,000 |

228. The first work was commenced in October 1860 on a special grant of Rupees 20,000 and completed by the latter end of March 1861, in a very creditable manner by Captain Farewell, Executive Engineer, Wellington. The work performed consisted of levelling the surface of the Ghat, reducing gradients where practicable, and constructing substantial rough-stone parapets and revetments, and also bridges and under-drains in lieu of the former water tables. The Ghat is now practicable for carts with light loads, and since the completion of the improvements the traffic has much increased and is likely to increase still more as the Railway approaches Coimbatore.

229. On the Hassanur Ghat side, drains have been cut and twelve miles of road more or less improved, but owing to a want of efficient superintendence, little or nothing has been done since December 1860.

230. The three Railway feeders abovementioned are about half completed, and a portion of the metal required for them has been collected.

231. The road between Coonoor and Ootacamund is being metalled throughout, and parapet walls built at the dangerous parts. About one-third of the improvements have been carried out, but the completion of the work has been deferred in consequence of the restriction on expenditure.

232. Of new Buildings, the only work requiring special notice is the Jail at Ootacamund, originally intended for the reception of prisoners convicted by the Principal Sudder Ameen's Court, but about to be converted into a prison for Europeans; the expenditure on which during the year is given at Rupees 20,302, making a total outlay up to the end of April 1860 of Rupees 46,834. The brick-work of the cells, corridors, &c. has been finished, and the Inspector General of Jails, under whose entire management the whole work has been carried out, considers that it will be fully completed in a short time.

233. The repairs to Irrigation works were of the ordinary description, and call for no particular notice. Those to roads have been carefully attended to, excepting at the Segoor Ghat and at the Ootacamund station roads, on which the funds were not very judiciously expended, the allotment having been too largely disbursed at the commencement of the year. On the whole, however, the District Engineer represents that the roads generally are in fair order.

234. The demand for labor at the Railway works has had a marked effect in increasing the rates of wages and prices of material in the Southern and Central parts of the District, while the dishonesty of one of the upper subordinates, and the misconduct of many of the lower, has tended much to delay the operations of the Department, but strenuous efforts are being made by the present District Engineer to effect a radical reform throughout the District, and it is hoped that ere long he will succeed in obtaining a better class of subordinates.

## SALEM.

235. According to the revised allotment, the sum authorized for expenditure in this District was Rupees 1,60,052, or Rupees 29,789 less than that entered in the Budget; but in April

Rupees 30,000 were transferred thereto from Bangalore which restored the funds to nearly their original amount. The expenditure has been Rupees 1,87,339 as follows :—

| | *New Works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation | 1,358 | 30,009 |
| Communications | 42,283 | 75,714 |
| Buildings | 36,570 | 1,405 |
| Total Rupees... | 80,211 | 1,07,128 |

236. The new works carried out relate principally to Communications and Buildings.

237. Of Communications the following are the most important :—

| | |
|---|---|
| Road connecting the Town and Railway Station at Salem... | Rupees 8,575 |
| Do. connecting the Town and Railway Station at Vaniembady... | „ 1,663 |
| Do. at Mullapooram with Odamancotta... | „ 12,003 |
| Do. at Morapoor... | „ 5,470 |

238. The first two of these important Railway feeders have been completed, and 8¾ miles of the third. The fourth line has also been finished with the exception of gravelling.

239. Two bridges have also been built, one over the Kullaur at Kaikondy on Trunk Road No. 1, and one over the Vapabuttoor river near Vaniembady. The expenditure at the former during the year was Rupees 3,015, and at the latter Rupees 3,547.

240. The chief buildings in progress were the new Court House and Jail at Salem, and the new Sick Stables for Horses at the Remount Depôt near Oossoor.

241. The Court House and Jail have been under execution since 1857, and are now nearly completed. Up to the 30th April 1860, the total expenditure on these amounted to Rupees 32,266 on the former, and Rupees 73,688 on the latter, of which 9,091 and 12,748 Rupees respectively were laid out during the past year. The Sick Stables at Oossoor were completed in March 1861 at a cost of Rupees 12,657.

242. Of repairs, those to Irrigation works have, as in 1859-60, been confined principally to tanks, of which 124 were repaired; 27 channels and 31 weirs have also been attended to, and the aggregate expense incurred on this account amounted to Rupees 30,009.

243. On the main lines of Communications, Rupees 72,704 were expended in repairs, and in addition to this sum, Rupees 33,587 were spent from the local funds on the construction of 50 miles of new, and the repair of 200 miles of old road. The tax levied for this purpose with the land assessment produced nearly 20,000 Rupees or 3,000 Rupees in excess of the collection in 1859-60.

244. The general working of the Department has been much more satisfactory than in previous years. Contractors have left off asking for advances, and Heads of Villages are beginning to understand that it is necessary for their own interests that they should rely upon themselves.

245. Prices of labor and material continue very high throughout the District.

## NORTH CANARA.

246. The funds allotted to this District were under the revision in November 1860, reduced from the Budget allowance of Rupees 1,80,262 to Rupees 1,25,891, and of this sum the following has been expended :—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Communications | 40,419 | 79,675 |
| Buildings | 1,059 | 4,738 |
| Total Rupees... | 41,478 | 84,413 |

247. The chief outlay it will be seen was on Communications, of which the principal were two very important lines of road leading from the Cotton-growing Districts of the Southern Mahratta country to the proposed new Port of Beitkul near Sedashegur. One through the Supa Taluq north of the Kali Nuddee, and the other through the Yellapur Taluq south of

the same river. Of these roads the former will probably be the greater boon to the District, opening, as it will, a first class communication through a mountainous and wooded country hitherto impervious to wheeled carriages, though the latter will be the most relied on for developing the resources of the Port. At the first of these two works the expenditure has been Rupees 15,840, for which twelve miles of new road, six on each side of Supa, have been traced, and six miles from Hullial to Sedashegur opened out to a width of four yards for cart traffic in dry weather. A large bridge near Hullial has also been nearly built up to the springing of the arches, and it is anticipated that the earthwork of the entire line will have sufficiently advanced by the end of 1861 to permit of Cotton being then brought down from the interior to the north bank of the Kali Nuddee or Sedashegur river.

248. At the second work known as the Kyga trace $8\frac{1}{4}$ miles of Ghat, and $9\frac{1}{4}$ miles of road near Beitkul have been opened out as a bridle path. Seven miles west of Iddagoonjee have also been cleared to four yards in breadth for cart traffic, and three miles beyond as a bridle path; at an outlay during the year of Rupees 1,383. Want of adequate superintendence has alone prevented the completion of the trace.

249. Besides the above works fair progress has been made with the new Gairsappa Ghat and road, as well as with that from Supa to Jugglepett through the Tinny Ghat. The bridges on the Sircy and Siddapoor road have also been completed and the construction of others on the road to Talgoppa is being carried on with funds provided for the purpose by the Mysore Government. The aggregate expenditure on these works, exclusive of that at the latter bridges, is Rupees 12,534.

250. On the District roads, Rupees 22,084 have been laid out in repairs, and in the construction of several drains and small bridges, and in altering parts of road previously taken over bad traces. A small bridge at Haulcul has also been built, and the conservancy of the roads throughout the District properly attended to. On the Dharwar and Coomptah road by the Sircy and Devamany Ghat the expenditure was Rupees 26,250, and on the Arbyle road Rupees 27,789. On the latter line the chief work undertaken was the reconstruction and repair of several bridges and road drains.

251. In some parts of the District fever prevailed, particularly in the Sircy range, where the works have, in consequence, been delayed. On the whole, however, the general progress of works has, considering the want of superintendence, been satisfactory. The prices of labor and material had risen and a still greater increase is anticipated.

## SOUTH CANARA.

252. The total amount placed at the disposal of the District Engineer for expenditure in this district was Rupees 41,060, or Rupees 12,432 less than the sum entered in the Budget, and the outlay has been Rupees 36,674, or about 19 per cent. more than that of 1859-60, viz:—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Communications | 9,737 | 19,507 |
| Buildings | 3,524 | 3,906 |
| Total Rupees... | 13,261 | 23,413 |

253. Little can be said of the operations of the Department in this District. As usual they have related chiefly to the maintenance and improvement of communications, the principal works, under which head, in progress during the past year, have been the metalling of the Sumpagee Ghat, and the construction of bridges on the Maury road. Upon the first work, the total expenditure from its commencement by the Mysore authorities has been Rupees 15,734, of which 3,002 Rupees were laid out in the year under review, and there still remains $6\frac{1}{4}$ miles of road to be metalled. On the Maury road seven bridges and three tunnels have been built at a cost of Rupees 6,735.

254. Of buildings, Rupees 2,326 have been spent in the construction of a new Sea Custom House at Angarkotta, and in improvements to the Collector's Kacheri. Two wells have further been cleared out and partially revetted at a cost of Rupees 1,116, in the new Cantonment on the Bolur Maidan.

255. Trunk Road Nos. 2 and 3 have been kept in good order with the annual allowance sanctioned for the purpose; but some parts of the former line requires re-metalling, especially that between Fraserpett and Mercara, over which the traffic is very great. On Road No. 3 bridges are much wanted, and the same may be said of the Haladi road circuit.

256. The chief requirements of the District are represented to be the widening of the Boon Ghat from Charmady to the Coffee Estates in Mysore, and certain improvements to the Mangalore Harbour. The demand for labor on the Coffee plantations has increased the rates of wages throughout the District and rendered all classes quite indifferent to Government employment. Moderately skilled superintendence is now hardly obtainable, and but little desire is evinced by the natives of the District to qualify for the Department.

MALABAR.

257. The Budget allowance for this District was Rupees 2,02,365 reduced in the allotment of September, to Rupees 1,94,765, and in that of November 1860 to Rupees 1,92,000, of which latter sum Rupees 1,61,465 have been expended in the following manner:—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigation.................. | 5,756 | 1,151 |
| Communications.............. | 99,892 | 17,037 |
| Buildings.................... | 25,791 | 11,838 |
| Total Rupees... | 1,31,439 | 30,026 |

258. The only work in progress under the head new works of irrigation was the Yennamakul Dam, at which certain improvements are being carried out. The outlay amounts to Rupees 5,755, and for this sum materials have been collected and a bund constructed across the breakwater to admit of the apron of the work being repaired.

259. Of Communications, the chief work has been the Perambadi Ghat, and Trunk Road leading from thence to Cannanore. For the last few years the state of this portion of Trunk Road No. 4 has been progressively improving; but in consequence of the unfavorable soil, over which it passes and the enormous traffic on it, a large annual outlay will be required there for sometime, particularly on the Ghat itself. The expenditure during the past year amounted to Rupees 25,752, and for this fourteen miles of road and four of Ghat were metalled, eight miles gravelled, eight miles cleared of jungle, the same number of miles levelled and otherwise improved, and the whole distance sixty-eight miles throughout repaired and side channels formed.

260. The next work of importance in progress was the Mundoor road. On this line the sum spent was Rupees 23,641, and the work performed consisted of six miles into Malliapooram bridged and gravelled, and the extension of the line thirty-two miles beyond that place to Angaddypooram and Manaur. Sixty-four miles of road have thus been nearly completed, thirty-one of which have been opened for traffic, and it is expected that the whole line from Calicut to Paulghat, eighty-four miles in length, through a thickly populated country chiefly inhabited by Moplahs, will be finished for wheeled carriage by the end of 1861-62.

261. On the Wynad communications the expenditure has been Rupees 11,995. Between Luckadie and Malliapooram a new trace has been carried out and a few miles widened. A new line near Gudaloor and Nelialum has also been traced for four miles, and upwards of a mile of new road made. On the line from Malliapooram to Bahully, several hills, impracticable for carts, have been turned, and the old bridges on the line *viâ* Kulpatti and Panamarum are being repaired.

262. At the Tambrachari Ghat Trace, Rupees 7,438 have been laid out in completing a track for bullocks, five and a half miles in length, and in the formation of one and a half mile of new road at the foot of the trace. The Sappers are engaged on the upper two miles (the Ghat by the new trace being about seven miles long) and have completed nearly half a mile of that part of the work. A great deal more remains to be done; but, with the assistance of the Sappers, it is hoped that the whole of the Ghat will be finished as a bullock track by the close of the next working season.

263. Besides these roads, Trunk Road No. 5 and the road from Collegode to Puthemagarum have been put in order throughout their whole length at an aggregate cost of Rupees 11,048.

Four miles of a new road from Wootipallum towards Chetpulcheroo have also been opened. This line when completed will act as a feeder to the railway. The Oority Truss bridge has been finished and opened for traffic at a total cost of Rupees 3,478. A bridge of five arches at Neerugumpillay on Trunk Road No. 5 has also been nearly completed.

264. Of Military buildings, the chief works have been the Apothecary's Quarters at Malliapooram, the Artillery Stables at Calicut, and improvements to the European Barracks at the same station. The first work has been fully, and the two latter nearly completed.

265. Of Civil buildings, the construction of an Engineer's Office yard at Calicut, and the erection of a building at Malliapooram for Divine Service, were the principal works in progress.

266. The total outlay on Repairs to roads and bridges amounted to Rupees 14,397, nearly one-half of which was laid out on Trunk Road No. 5; a large sum was also expended on the roads leading from the Tambrachari Ghat, and from Paulghat to Calicut. The annual repairs to the Periah, Cotiaddy, Tambrachari and Carcoor Ghats leading from Wynad were also attended to, and they are now in fair order; though the sums allowed are not sufficient to effect any marked improvement.

267. The repairs to irrigation works and buildings do not require special notice.

268. The rains extended this season beyond their usual period, and all the Executive Officers of the Department suffered from fever, as well as many of the upper and lower subordinates, several of whom were for a time incapacitated for the performance of their duties.

## PRESIDENCY.

269. Since the 1st July 1860, the works in this District have, in accordance with the orders of Government, been under the charge of one Officer, with the designation of District Engineer, and although a sufficient time has not yet elapsed to admit of a decided opinion being formed regarding the advantage or otherwise of this amalgamation of the two Executive Establishments of the Civil Architect and Garrison Engineer, yet, it may be remarked, that the former anomaly of two Government Officers in one place competing for labor and materials no longer exists, and that the change has, therefore, been so far beneficial and conducive to the interests of Government.

270. The allotment of funds in the budget was Rupees 8,49,016, which, by subsequent revision, was reduced to Rupees 3,97,943. The expenditure,* however, has been Rupees 17,940 in excess of this amount, in consequence of a misconception on the part of the District Engineer in regard to a sum of Rupees 33,176 recovered by him on account of House-rent, sale of unserviceable materials, and advances of previous years, which he considered were available for expenditure in addition to the regular allotment. But though this was an irregularity which ought not to have occurred, the excess is more than covered by the unexpended balances in other Districts.

*Rupees 4,15,883.

271. The expenditure is classed as follows :—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Irrigations............ | 823 | 45 |
| Communications............ | 9,457 | 4,927 |
| Ports and Harbours......... | 3,562 | ..... |
| Buildings.................... | 3,27,408 | 69,661 |
| Total Rupees... | 3,41,250 | 74,633 |

and from this it will be observed that the construction of buildings (Military and Civil) has been the chief work of the Department.

272. Of these the following may be noticed :—

### MILITARY.

| | | |
|---|---|---|
| 1. | Remodelling the sea-face of the Fortifications and re-building portion of the counterscarp walls of the North-east demi-orillon Bastion........................ | Rupees 74,855 |
| 2. | Saint Thomé Caponniere........................ | „ 5,294 |
| 3. | Do. Ravelin........................ | „ 19,535 |
| 4. | Drainage of Fort Saint George........................ | „ 7,006 |
| 5. | Verandahs to the European Barracks........................ | „ 22,708 |

| | | |
|---|---|---|
| 6. Alterations to interior of the European Barracks............ | Rupees | 3,578 |
| 7. Laying line of water Pipes from the Seven Wells to Fort St. George.................. | „ | 31,217 |
| 8. Improvements to the Parcherry Barracks.................. | „ | 2,235 |
| 9. Building for a Nasmyth's Hammer at the Gun Carriage Manufactory.................. | „ | 5,364 |
| 10. Engine House, &c., at the Gunpowder Manufactory.............. | „ | 4,904 |

273. The first and sixth works are nearly completed. Satisfactory progress has also been made with the second and third; notwithstanding the difficulty which has been experienced in obtaining a sufficient supply of good bricks. The fourth work was suspended, pending the sanction of the Supreme Government lately received to a revised estimate.* The fifth, eighth, and tenth works have been completed, the first two affording much comfort to the men occupying the buildings; and with regard to the seventh work, 5,500 feet in length of piping have been laid down and fair progress is being made with the remainder.

*Vide Proceedings of Government, dated 27th May 1861, No. 992.

274. Of Civil buildings, the following were the chief:—

| | | |
|---|---|---|
| New wing to the General Hospital.—Walls ready for flooring. | Rupees | 35,096 |
| Arrack Distilling at Tondiarpett.—Nearly completed........ | „ | 15,362 |
| Upper story to the Central Office, Chepauk.—Nearly completed.. | „ | 13,416 |
| Alterations to the Chepauk Palace for the Office of the Board of Revenue.—Completed.................. | „ | 6,524 |
| Do. Civil Auditor's Office.—Nearly completed......... | „ | 5,608 |
| Library and Reading Rooms at the Government Museum.—Completed.................. | „ | 4,583 |
| Cistern and Turbine Wheel for shafting of the Government Press.—Cistern completed.................. | „ | 4,666 |

275. The following works of Communications have also been completed.

| | | |
|---|---|---|
| Raising the Piers to Saint Mary's Bridge.................. | „ | 2,322 |
| Constructing roads in the Chepauk compound.................. | „ | 1,783 |
| Do. do. on the South bank of the Cooum river | „ | 2,063 |

276. Besides the foregoing, the only work of note carried out was the Groynes constructed on the North Beach for the protection of the road between Clive's Battery and the Sea Custom House, on which Rupees 3,461 have been expended with advantage.

277. Of the sum laid out in repairs to buildings Rupees 38,796 were spent on Military, and the remainder on Civil buildings, none of which need notice.

278. The rates of labor have increased, and prices of material continue to rise, and much difficulty has been experienced in obtaining a sufficient supply of bricks for some of the works under execution. On the whole, however, it may be considered that satisfactory progress has been made with the several works during 1860-61.

## BANGALORE.

279. The Budget allowance for this charge was Rupees 3,22,700, and the revised allotment Rupees 2,34,565, from which Rupees 30,000 were withdrawn in April 1861 and transferred to the Salem District.

280. The expenditure has been Rupees 1,83,417, viz.:—

| | *New works.* | *Repairs.* |
|---|---|---|
| | RS. | RS. |
| Communications.............. | 1,134 | 6,089 |
| Buildings.................. | 1,67,138 | 9,056 |
| Total Rupees... | 1,68,272 | 15,145 |

or Rupees 1,296 in excess of the outlay in 1859-60.

281. The chief attention of the Department was, as in previous years, directed to the execution of Military works, but owing to the difficulty of obtaining from the Mysore and Madras markets a sufficient supply of good Teak timber, the completion of some of these works has been delayed.

282. At the old Dragoon Barracks eight ranges have been enlarged and improved at a total cost of Rupees 1,60,660, of which Rupees 24,609 were expended during the last year, and the following buildings attached to these Barracks have also been completed, or nearly so, viz :—

| | | |
|---|---|---|
| Eighty-four Married Men's Quarters................. | Rupees | 23,031 |
| Eight Wash-houses with drainage...................... | " | 1,453 |
| Staff Serjeants' Quarters.................................. | " | 12,235 |
| Improvements to Hospital................................ | " | 10,966 |

283. The other Military works of importance in progress were the new Dragoon Barracks, and an Orderly-room to the Horse Artillery Barracks with Married Men's Quarters to ditto. At the first work, six blocks with out-offices have been built, and materials collected for the remainder. The expenditure thereon during the year under notice was Rupees 68,734. The second work has been finished on Contract at a cost of Rupees 5,138, and at the Married Men's Quarters, three-fourths of which are nearly completed, the expenditure has been Rupees 12,334.

284. The Cantonment roads, eighteen miles in length, have been maintained in good order, and a new road opened from the Artillery Lines to the Race Course at an expenditure of Rupees 7,223.

285. The buildings under the charge of the Executive Officer of Bangalore, at the several Military Stations in the Mysore Territories, have been kept in good repair.

286. The rates of labor continue the same as in 1859-60, but the price of Teakwood has risen to nearly 50 per cent. higher than it was in 1858.

287. The Company of Sappers and Miners sent to the works have afforded much assistance particularly at a time of the year when it was found difficult to obtain a sufficient number of Coolies for the prosecution of work connected with the drainage of the Cantonment Bazar.

288. The value of material prepared and issued from the Engineer's Work yard, is Rupees 38,202.

## WELLINGTON.

289. From March last the works at this station have been subject to the general control of the District Engineer of Coimbatore, in the same manner as other works in that District; it being considered desirable that the Special Executive Engineer in charge, who had in addition to his other duties been entrusted with the supervision of the Neilgherry range, should be subordinate to that Officer in every respect, in order that misunderstanding might be avoided.

290. The sum entered in the Budget for expenditure was Rupees 3,17,050, which by subsequent revision was reduced to Rupees 1,53,202, and the outlay has been Rupees 1,53,313, under the following heads :—

| | | |
|---|---|---|
| New Works............................ | Rupees | 1,46,666 |
| Repairs.................................... | " | 6,647 |
| Total Rupees...... | | 1,53,313 |

making a total expenditure of Rupees 17,59,966 on the Barracks and its subsidiary buildings and works connected therewith.

291. The chief work in progress during the year has been the carrying out nearly to completion the Married Men's Quarters and their adjoining out-offices at a cost of Rupees 58,927.

292. Nos. 1, 2, 3 and 5 ranges of Barracks have also been completed, and the Wash-houses in rear of Nos. 3 and 5, built at an expense of Rupees 7,530.

293. A further expenditure of Rupees 22,636 was incurred in completing a School-room and Library, since taken possession of by the Military authorities, and Rupees 3,420 in the erection of a Market-Shed; while other works, such as the drainage of the Hospital and Barrack square, the laying down of water service pipes to the several buildings, the erection of temporary Cells in No. 3 Block of Married Men's Quarters, &c., received a fair share of attention.

294. The Mudamali Forest, from whence the supply of Timber for these works is derived, was made over to the Forest Conservancy Department in October 1860.

295. The Cantonment and Forest roads with all the water courses supplying the Cantonment have been kept in repair, and one-half of the site selected for a plantation has been planted with trees, and the other half made ready for the reception of others during the next monsoon. Across the Waterloo stream a timber trussed bridge has also been re-built at an expense of Rupees 1,649 and opened for traffic.

296. The Peat Bog has been worked whenever the weather permitted. During the year 178 tons of fuel were made and conveyed to the Cantonment; besides 94 tons supplied to the Commissariat Department.

297. Skilled artificers and laborers were obtained without difficulty, and latterly great numbers were discharged in consequence of the reduced expenditure. European labor has been invariably accepted when circumstances permitted.

CONCLUSION.

298. Having thus given as briefly as possible, consistent with clearness, an account of the chief operations of the Department in each District during the past year, I will conclude with the following general observations on the subject of the Audit, Store, and Lithographic Departments attached to this Office.

299. In the Proceedings of Government, dated 12th February 1861, No. 293, Colonel Lawford was appointed Auditor of Public Works Accounts, with a view of securing an independent audit. Consequent, however, on his transfer to Mysore as Chief Engineer in March following, the system of audit previously obtaining was reverted to, and as the time Colonel Lawford was in charge of the Department was thus of but short duration, no opinion can be formed of the practical result, efficient or otherwise, of the change of system.

Vide Proceedings of Government, dated 4th March 1861, No. 519.

300. The work performed during the past year contrasts very favorably with that done in 1859-60. The total number of Bills disposed of is 12,388, amounting to Rupees 71,43,190, as compared with 9,398 Bills representing Rupees 62,07,673, passed in the preceding year; while the number of Bills remaining on hand on the 30th April 1861 is less both as regards number and amount, the latter in particular, than at the close of 1859-60. A result which cannot but be considered as highly satisfactory, especially when it is remembered that a large number of Bills was received from Tanjore relating to expenditure of former years, the examination of which took up much of the time and attention of the Auditors.

301. As respects the number of Bills shown in the following statement as remaining on hand, it will be seen from the return included in the Appendix, that 198 Bills for Rupees 63,979-6-3 were received subsequent to the 20th April 1861, and that, consequently, there was but little time to dispose of them previous to the close of the past year. With regard to those Bills received between the 1st February and 20th April 1861, the delay in their disposal arose from the necessity of references being made to the District Engineers concerning them, but they have now been nearly all audited and passed.

| | Bills received during the year. | | Disposed of. | | Remaining on hand on the 30th April. | |
|---|---|---|---|---|---|---|
| | No. | Amount. | No. | Amount. | No. | Amount. |
| In 1859-60 ........... | 9,612 | 67,95,252 | 9,398 | 62,07,673 | 214 | 5,87,579 |
| „ 1860-61 ........... | 12,386 | 66,39,195 | 12,388 | 71,43,190 | 212 | 83,583 |

302. In the Appendix will be found the usual statements of the issue of Machinery, Scientific Instruments, Entrenching Tools, &c., from the Store Department to the several Districts.

303. As regards Machinery the demand was very limited, nearly all the Districts having had at the commencement of the past official year as much in hand as could be usefully employed. For the same reason, but few Instruments were supplied to the Department; while, with respect to tools, the issue from the general Stores of the Department has been much less than in the preceding years; owing, I conclude, to many Officers having supplied themselves from the local Arsenals and markets with articles of country and of European manufacture.

No. 1.—STATEMENT of expenditure on account of Salaries, Establishments, &c. of the Department of Public Works during the official year 1860-61, showing the per centage thereof in each District to the outlay upon Public Works therein.

| | Salaries of Officers and Subordinates. | | Office Establishments. | Travelling and Horse allowance. | Travelling batta to Office Establishments. | Office Rent | Pay of Probationers sent out from England. | Pay of Mechanical Engineers. | Freight, Landing and Shippingcharges | Contingent charges. | Conservancy and Channel Establishments. | Total. | Expenditure upon Public Works. | Per Centage of salaries to Works. | | REMARKS. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Civil. | Military. | | | | | | | | | | | | | | |
| | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | | Decimals. | |
| Central Office... | 65,038 | 28,466 | 84,628 | 804 | 253 | ... | 2,637 | 23,735 | 23,877 | 10,000 | .. | 2,39,528 | ... | ...... | ... | |
| Do. Lithographic Press | ... | ... | 20,566 | ... | ... | ... | ... | ... | ... | ... | ... | 20,566 | ... | ...... | ... | |
| Ganjam... | 17,547 | 5,474 | 8,103 | 5,606 | 198 | 360 | ... | ... | ... | 181 | 732 | 38,201 | 92,142 | 41 | 458 | |
| Vizagapatam... | 16,100 | 7,478 | 6,357 | 3,805 | 191 | 380 | ... | ... | ... | 436 | ... | 34,747 | 47,376 | 73 | 345 | * Includes Rupees 2,837 for Medical allowance |
| Godavery... | *62,122 | 6,753 | 17,285 | 12,163 | 470 | 85 | 2,796 | 14,307 | ... | 1,071 | 34,742 | 1,51,794 | 3,16,366 | 48 | 392 | † Do. do. 2,478 for do. do. |
| Kistnah... | †42,327 | 12,937 | 16,239 | 12,408 | 1,803 | ... | ... | ... | ... | 1,483 | 15,831 | 1,03,028 | 2,54,409 | 40 | 497 | |
| Nellore... | 32,420 | 9,385 | 12,290 | 12,830 | 1,106 | ... | 270 | 2,908 | ... | 1,288 | 8,055 | 80,552 | 3,20,930 | 25 | 099 | |
| Cuddapah... | 35,280 | 5,926 | 10,790 | 11,727 | 1,803 | 360 | ... | ... | ... | 853 | ... | 66,739 | 1,82,012 | 36 | 667 | |
| Bellary... | 32,996 | 13,067 | 14,150 | 13,225 | 2,022 | 360 | ... | ... | ... | 962 | ... | 76,782 | 2,31,679 | 33 | 141 | |
| Kurnool... | ‡17,786 | 4,530 | 7,504 | 5,701 | 699 | 330 | ... | ... | ... | 400 | ... | 36,950 | 80,824 | 45 | 716 | ‡ Includes Rupees 26 for Medical allowance. |
| Madras... | 31,508 | 5,872 | 11,274 | 7,457 | 1,000 | 100 | ... | ... | ... | 449 | ... | 57,660 | 2,39,622 | 24 | 062 | |
| North Arcot... | 31,966 | 8,322 | 12,804 | 10,963 | 292 | 360 | ... | ... | ... | 274 | 2,519 | 67,500 | 1,61,376 | 41 | 828 | |
| South Arcot... | 29,974 | 4,708 | 10,492 | 11,382 | 1,028 | ... | 1,477 | ... | ... | 438 | 1,773 | 61,272 | 1,50,484 | 40 | 716 | |
| Tanjore... | 38,957 | 9,865 | 15,975 | 13,514 | 1,810 | ... | 56 | ... | ... | 555 | 5,687 | 86,419 | 2,88,347 | 29 | 970 | |
| Trichinopoly... | 27,444 | 7,763 | 10,344 | 7,775 | 1,421 | 360 | ... | ... | ... | 1,114 | 1,296 | 57,517 | 1,72,958 | 33 | 254 | |
| Madura... | 27,460 | 8,807 | 12,073 | 5,193 | 1,232 | 307 | ... | 204 | ... | 679 | 426 | 58,381 | 79,514 | 70 | 810 | |
| Tinnevelly... | 25,615 | 5,285 | 10,772 | 7,364 | 1,338 | ... | ... | ... | ... | 302 | 1,162 | 51,838 | 75,313 | 68 | 850 | |
| Coimbatore... | 41,638 | 8,447 | 9,947 | 7,557 | 326 | ... | 3,045 | ... | ... | 398 | ... | 71,358 | 1,45,281 | 49 | 117 | |
| Salem... | 23,545 | 5,872 | 7,493 | 7,447 | 651 | 390 | ... | ... | ... | 1,066 | ... | 48,464 | 1,87,339 | 25 | 869 | |
| North Canara... | 19,048 | 6,107 | 7,202 | 5,024 | 786 | 346 | ... | ... | ... | 487 | ... | 39,000 | 1,25,891 | 30 | 979 | |
| South Canara... | 12,181 | 2,936 | 6,197 | 1,682 | 315 | 248 | ... | ... | ... | 112 | ... | 23,671 | 36,674 | 64 | 544 | |
| Malabar... | §28,620 | 11,801 | 8,436 | 8,201 | 306 | 350 | ... | ... | ... | 568 | ... | 58,292 | 1,61,465 | 36 | 101 | § Includes Rupees 953 for Medical allowance. |
| Presidency... | 38,726 | 9,432 | 14,902 | 3,240 | ... | ... | ... | ... | ... | 1,237 | ... | 67,537 | 4,15,883 | 16 | 239 | |
| | | | | | | | | | | | | | 24,397 | ...... | ...... | Municipal Department. |
| Upper Godavery... | 8,136 | ¶6,13[illegible] | ... | 228 | ... | ... | ... | ... | ... | 297 | ... | 14,798 | 77,976 | 18 | 977 | ¶ Includes pay of Lieutenant Montgomeria. |
| Wellington... | 4,800 | ... | ... | 416 | ... | ... | ... | ... | ... | 45 | ... | 5,261 | 1,53,313 | 3 | 431 | |
| Bangalore... | 7,500 | [illegible],817 | [illegible],731 | 469 | ... | ... | ... | ... | ... | 170 | ... | 16,627 | 1,83,447 | 9 | 65 | |
| Total... | 7,18,734 | 1,93,187 | 3,40,554 | 1,78,211 | 19,050 | 4,346 | 10,281 | 41,154 | 23,877 | 24,865 | 72,223 | 16,32,482 | 42,04,988 | 39 | 288 | |
| Working money to Details of Sappers and Miners... | | | | | | | | | | | | 7,018 | | | | |
| Stationery charges... | | | | | | | | | | | | 16,170 | | | | |
| | | | | | | | | | | | | 16,55,670 | 42,04,988 | 39 | 843 | |

304. The following is an abstract of the quantity and value of work performed by a portion of the Lithographic Department.

| | *Copies.* | *Impressions.* | | *Value.* |
|---|---|---|---|---|
| Maps and Drawing ......................... | 14,969 | 15,170 | Rs. | 3,205 |
| Circulars and Forms executed on every way. | 6,707 | 11,871 | „ | 831 |
| Seal Labels ............................... | 2,40,250 | 41,146 | „ | 3,603 |
| Coloring Plans ............................ | 177 | ... | „ | 354 |
| | | Total Rupees...... | | 7,993 |

Cost of Establishment, Rupees...... 6,958

305. The rest of the Department were employed upon large manuscript Maps, &c., the value of which cannot well be ascertained, though it is quite certain that they occupied much time and labor in their preparation. Had it not been for these Maps, the statement furnished by the Superintendent, and entered in the Appendix, would probably have exhibited a greater quantity of Lithographic work done by the whole Department.

306. The rates of labor and prices of material prevailing during the past year has been adverted to in the account above given of the operations of the Department in each District. On the 27th May 1861, a special report on this subject was submitted to Government* and subsequently measures were taken for ensuring the data being revised every year.†

* Vide Proceedings of Government, dated 6th July 1861, No. 56.
†Vide "Standing Circular," No. 23, of 21st June 1861.

307. In conclusion, I have the honor to recommend that the submission of this report may for the future be discontinued, and a duplicate copy of the Annual Progress Report accepted in its stead, as with its covering letter it would, if accompanied with the required statements of Traffic, issue of Stores, &c. &c., be found to answer equally as well, and, if printed, be, from the varied character of the information which it contains, much more useful to the Department for general reference.

308. I am aware that on a former occasion a similar application was negatived; but as the present annual report of operations seems to me to be in many instances a needless repetition of facts detailed in the Administration Report usually submitted on the 15th June of each year for transmission to the Government of India, I trust that for the reasons above given that Government will be pleased to sanction its discontinuance in this Department, as I observe, has been done in the case of the Educational Department, as well as in that of the Inspector General of Jails.

Vide Extract Minutes of Consultation, No. 2371, dated 11th November 1858.
Vide Extract Minutes of Consultation, No. 677, dated 23rd March 1859.

No. 881, dated 9th July 1861, Public Department.

I have the honor to be,

Sir,

Your most obedient servant,

Central Office of P. W., Chepauk,
*30th September* 1861.

W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer, D. P. W.*

P. S.—A copy of the statement of remunerative works for the year 1859-60, submitted by me on the 28th January 1861, will be found in the Appendix.

With letter, No. 9317.

No. 2.

REPORT *of Audit of Bills for Public Works Department in the Chief Engineer's Office from May* 1860 *to April* 1861.

| Bills remaining on the 1st May 1860. No. | Amount. | Bills received during the official year 1860-61. No. | Amount. | Total. No. | Amount. | Bills passed by the Chief Engineer. No. | Amount. | Bills recommended to Government. No. | Amount. | Bills objected to and returned. No. | Amount. | Total. No. | Amount. | Bills remaining on the 1st May 1861. No. | Amount. | Date of receipt of the Bills longest on han… |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| .... | .... | 167 | 2,43,775 12 4 | 167 | 2,43,775 12 4 | 162 | 2,39,825 10 9 | 1 | 204 0 0 | 4 | 3,746 1 7 | 167 | 2,43,775 12 4 | .... | .... | |
| .... | .... | 117 | 51,550 14 3 | 117 | 51,550 14 3 | 90 | 32,434 4 6 | 3 | 362 3 11 | 22 | 16,929 0 9 | 115 | 49,725 9 2 | 2 | 1,825 5 1 | 30th Mar. 18… |
| .... | .... | 554 | 7,57,369 4 6 | 554 | 7,57,369 4 6 | 297 | 2,69,226 6 3 | 8 | 54,260 14 3 | 237 | 4,16,103 2 1 | 542 | 7,39,590 6 7 | 12 | 17,778 13 11 | 1st Feb. 186… |
| .... | .... | 5 | 1,18,624 11 10 | 5 | 1,18,624 11 10 | 3 | 1,08,210 8 3 | .. | ..... | 2 | 10,414 3 7 | 5 | 1,18,624 11 10 | .... | .... | |
| .... | .... | 507 | 1,64,839 1 0 | 507 | 1,64,839 1 0 | 477 | 1,47,813 6 8 | 1 | 275 8 10 | 29 | 16,750 1 6 | 507 | 1,64,839 1 0 | .... | .... | |
| .... | .... | 764 | 4,70,301 1 6 | 764 | 4,70,301 1 6 | 664 | 3,85,358 14 6 | 12 | 17,072 8 4 | 88 | 67,869 10 8 | 764 | 4,70,301 1 6 | .... | .... | |
| .... | .... | 275 | 1,11,403 1 9 | 275 | 1,11,403 1 9 | 273 | 1,11,140 6 7 | .. | .... | 2 | 262 11 2 | 275 | 1,11,403 1 9 | .... | .... | |
| .... | .... | 491 | 3,60,153 6 5 | 491 | 3,60,153 6 5 | 292 | 2,02,051 14 8 | 4 | 2,751 12 7 | 164 | 1,48,916 1 0 | 460 | 3,53,719 12 3 | 31 | 6,433 10 2 | 26th April 1… |
| .... | .... | 114 | 1,25,202 7 6 | 114 | 1,25,202 7 6 | 96 | 83,637 0 2 | 2 | 79 4 10 | 16 | 41,486 2 6 | 114 | 1,25,202 7 6 | .... | .... | |
| .... | .... | 305 | 2,32,077 11 4 | 305 | 2,32,077 11 4 | 247 | 1,95,376 9 8 | 30 | 9,718 0 9 | 28 | 26,983 0 11 | 305 | 2,32,077 11 4 | .... | .... | |
| .... | .... | 252 | 1,28,480 6 11 | 252 | 1,28,480 6 11 | 246 | 1,22,515 0 2 | .. | .... | 6 | 5,965 6 9 | 252 | 1,28,480 6 11 | .... | .... | |
| .... | .... | 595 | 2,03,960 12 3 | 595 | 2,03,960 12 3 | 539 | 1,96,346 2 0 | .. | .... | 56 | 7,614 10 3 | 595 | 2,03,960 12 3 | .... | .... | |
| 48 | 5,51,854 14 1 | 4,256 | 10,68,363 9 5 | 4,304 | 16,20,218 7 6 | 3,861 | 14,52,426 1 4 | 130 | 40,217 2 1 | 238 | 1,08,721 8 3 | 4,229 | 16,01,364 11 8 | 75 | 18,853 11 10 | 25th April 1… |
| 163 | 30,821 3 8 | 881 | 4,10,794 10 6 | 1,044 | 4,41,615 14 2 | 647 | 2,25,749 7 8 | 73 | 26,658 12 4 | 255 | 1,54,311 8 0 | 975 | 4,06,719 12 0 | 69 | 34,896 2 2 | 20th do. |
| .... | .... | 651 | 1,75,331 7 5 | 651 | 1,75,831 7 5 | 473 | 1,20,237 14 0 | 36 | 2,698 14 1 | 142 | 52,894 11 4 | 651 | 1,75,831 7 5 | ..... | .... | |
| .... | .... | 418 | 2,85,283 11 9 | 418 | 2,85,283 11 9 | 381 | 2,79,326 5 10 | .. | ...... | 14 | 2,161 7 10 | 395 | 2,81,487 13 8 | 23 | 3,795 14 1 | 30th do. |
| .... | .... | 283 | 1,81,164 7 8 | 283 | 1,81,164 7 8 | 190 | 96,047 1 5 | 4 | 2,589 4 3 | 89 | 82,528 2 0 | 283 | 1,81,164 7 8 | .... | .... | |
| .... | ..... | 477 | 1,96,618 6 7 | 477 | 1,96,618 6 7 | 421 | 1,50,917 11 3 | 4 | 11,325 7 0 | 52 | 34,375 4 4 | 477 | 1,96,618 6 7 | .... | .... | |
| .... | .... | 52 | 78,578 6 9 | 52 | 78,578 6 9 | 40 | 12,596 6 7 | 1 | 198 9 6 | 11 | 65,783 6 8 | 52 | 78,578 6 9 | .... | .... | |
| .... | .... | 75 | 31,263 0 4 | 75 | 31,263 0 4 | 68 | 30,710 13 2 | .. | .... | 7 | 552 3 2 | 75 | 31,263 0 4 | ..... | .... | |
| .... | .... | 614 | 1,93,091 7 7 | 614 | 1,93,091 7 7 | 521 | 1,53,998 9 0 | 1 | 56 6 10 | 92 | 39,036 7 9 | 614 | 1,93,091 7 7 | ..... | .... | |
| .... | .... | 352 | 5,69,980 3 8 | 352 | 5,69,980 3 8 | 240 | 4,44,943 15 11 | 80 | 69,108 14 10 | 32 | 55,927 4 11 | 352 | 5,69,980 3 8 | .... | .... | |
| .... | .... | 128 | 1,98,999 9 8 | 128 | 1,98,999 9 8 | 117 | 1,75,977 15 9 | 1 | 629 1 2 | 10 | 22,392 8 9 | 128 | 1,98,999 9 8 | .... | .... | |
| 3 | 4,903 0 11 | 53 | 2,81,487 9 2 | 56 | 2,86,390 10 1 | 35 | 2,27,541 11 2 | 1 | 624 4 0 | 20 | 58,224 10 11 | 56 | 2,863,90 10 1 | .... | .... | |
| 214 | 5,87,579 2 8 | 12,386 | 66,39,195 6 1 | 12,600 | 72,26,774 8 9 | 10,380 | 54,64,410 5 3 | 392 | 2,38,831 1 7 | 1,616 | 14,39,949 8 8 | 12,388 | 71,43,190 15 6 | 212 | 83,583 9 3 | |

 **Proceedings of the Madras Government, Public Works Department, 28th November 1861.**

From

THE SUPERINTENDENT AND MANAGER

*of the Government Lithographic Press.*

To

LIEUT.-COLONEL W. H. HORSLEY,

*Chief Engineer, Department of Public Works.*

SIR,

1. Annexed, I beg to submit the usual Comparative Statement of work executed at the Government Lithographic Press of this Office, for the official years 1859-60 and 1860-61.

2. By the memorandum at foot of the Statement, it will be observed that the majority of the Draftsmen of the Department were employed, during the year under review, upon large manuscript Maps, &c., a description of work that cannot well be valued, and has, hitherto, never been valued. The balance of Rupees 1,034-11-6 in favor of the Press, is the result of Lithographic and Color work performed by the remainder of the Department.

3. The new Plan of Madras referred to in the concluding paragraph of last year's Report, has, for some time past, been set aside for the want of further *Key Maps* of the Madras Revenue Survey from which it is being compiled; but as these are expected from Captain Priestly, this Plan will shortly be again put in hand.

4. The compilation of the new set of Public Works' Maps, on a scale of 4 miles to the inch, referred to in the 4th paragraph of last Report, which was for a while suspended for the execution of other work of a more emergent character, has been resumed: it is to be hoped that a few of these Maps will be passed through the Press this year.

5. The lithographing of the *new District Maps*, on a scale of 2 miles to the inch, has commenced. The Cantonment Plans of the Presidency, on a scale of 500 feet to the inch, are also being lithographed.

I beg to remain, &c.

(Signed) J. DUMPHY,

*Superintendent and Manager.*

GOVERNMENT LITHOGRAPHIC PRESS,
CENTRAL OFFICE OF PUBLIC WORKS,
CHEPAUK, *3rd June* 1861.

(True Copy.)

(Signed) W. H. HORSLEY, Lieut. Col.,

*Chief Engineer, D. P. W.*

No. 3.

*Comparative Statement of Work executed at the Government Lithographic Press, during the official years* 1859-60 *and* 1860-61.

| | 1859-60. | | | | | | 1860-61. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Maps and other Drawings. | | Circulars, Forms, &c. | | Seal Labels. | | Maps and other Drawings. | | Circulars, Forms, &c. | | Seal Labels. | |
| | No of Copies. | No of Impressions. | No of Copies. | No of Impressions. | No. of Labels. | No. of Impressions. | No. of Copies. | No. of Impressions. | No. of Copies. | No. of Impressions. | No. of Labels. | No. of Impressions. |
| Central Office of Public Works... ... ...... | 3,124 | 3,414 | 17,267 | 21,613 | 10,200 | 1,433 | 962 | 962 | 4,340 | 4,942 | 23,150 | 5,634 |
| District Engineers, through Central Office. ... | ... | ... | ... | ... | 3,000 | 750 | ... | ... | ... | ... | 36,000 | 2,600 |
| Government Office, Public Department... ... | 1,599 | 2,203 | ... | ... | ... | ... | 664 | 694 | ... | ... | ... | ... |
| Do. Financial do. ... ... | 19 | 19 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Do. Military do. ... ... | ... | ... | ... | ... | 15,150 | 2,525 | 1 | 6 | ... | ... | 19,900 | 3,317 |
| Do. Judicial do. ... ... | 10 | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Do. Public Works do. ... ... | 354 | 587 | ... | ... | 10,000 | 1,668 | 77 | 230 | ... | ... | 12,300 | 2,017 |
| Do. Railway do. ...... | 32 | 32 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Do. Chief Secretary's do. ... | ... | ... | ... | ... | 15,000 | 3,125 | ... | ... | ... | ... | 15,000 | 2,461 |
| Government Gazette Press... ... ... ... | 9,674 | 10,789 | ... | ... | ... | ... | 3,161 | 4,073 | ... | ... | ... | ... |
| Inspector General of Ordnance and Magazines (late Military Board)... ... ... ... ... | 9,800 | 9,800 | ... | ... | ... | ... | 1,000 | 1,300 | ... | ... | 1,000 | 250 |
| Revenue Board Office ... ... ... ... ... | 400 | 100 | ... | ... | 16,700 | 2,933 | ... | ... | ... | ... | 14,400 | 3,000 |
| Adjutant General's Office... ... ... ... ... | 60 | 60 | ... | ... | 8,000 | 1,336 | ... | ... | ... | ... | 8,000 | 1,833 |
| Town Major's Office (now styled Brigade Office) | ... | ... | ... | ... | 5,000 | 834 | ... | ... | ... | ... | 5,000 | 832 |
| Quarter Master General's Office... ... ...... | 1,100 | 1,200 | ... | ... | ... | ... | 200 | 1,200 | ... | ... | ... | ... |
| Collector of Madras... ... ... ... ... ... | 1,500 | 1,753 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| University of Madras... ... ... ... ...... | 200 | 200 | ... | ... | ... | ... | 20 | 20 | ... | ... | ... | ... |
| Conservator of Forests... ... ... ... ... | 1,050 | 5,050 | ... | ... | ... | ... | 500 | 500 | ... | ... | ... | ... |
| Office of the Commandant of Engineers... ... | 282 | 94 | ... | ... | ... | ... | ... | ... | 200 | 200 | 1,000 | 200 |
| Accountant General's Office... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 12,000 | 3,000 |
| Supg. Engineers of Circles, Central Office of P. W., (now Deputy Chief Engineer's.)... | ... | ... | ... | ... | 2,700 | 450 | ... | ... | ... | ... | 12,000 | 2,000 |
| Male Asylum Press... ... ... ... ... ... ... | 808 | 404 | ... | ... | ... | ... | 810 | 405 | ... | ... | ... | ... |
| Madras Journal of Literature and Science. ... | 2,804 | 2,804 | ... | ... | ... | ... | 704 | 352 | ... | ... | ... | ... |
| Commissary General's Office... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2,000 | 500 |
| Lieut. Taylor's Charts, for sale and distribution (by order of Government.)... ... ... | 600 | 600 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

*Comparative Statement of Work executed at the Government Lithographic Press, during the official years 1859-60 and 1860-61.*

| | 1859-60. | | | | | | 1860-61. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Maps and other Drawings. | | Circulars, Forms, &c. | | Seal Labels. | | Maps and other Drawings. | | Circulars, Forms, &c. | | Seal Labels. | |
| | No. of Copies. | No. of Impressions. | No. of Copies. | No. of Impressions. | No. of Labels. | No. of Impressions. | No. of Copies. | No. of Impressions. | No. of Copies. | No. of Impressions. | No. of Labels. | No. of Impressions. |
| Madras Observatory (by order of Government) | ... | ... | 949 | 2,468 | ... | ... | ... | ... | ... | ... | ... | ... |
| Acts of the Government, in Hindoostanee, for the Persian Translator | ... | ... | ... | ... | ... | ... | ... | ... | 500 | 5,000 | ... | ... |
| Principal of the Civil Engineering College | ... | ... | ... | ... | ... | ... | 971 | 1,032 | ... | ... | ... | ... |
| Director General of Medical Department | ... | ... | 148 | 148 | ... | ... | ... | ... | ... | ... | ... | ... |
| Civil Architect's Office | 50 | 50 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Engineer's Library attached to the Commandant of Engineers | 25,000 | 25,500 | 160 | 160 | ... | ... | ... | ... | 62 | 124 | ... | ... |
| Inspector General of Jails | 250 | 250 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| R. Watson, Esq., (by order of Chief Engineer) | 114 | 342 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Garrison Engineer's Office | 372 | 124 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| His Excellency the Governor | 200 | 300 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| For the Sanitary Committee (by order of Chief Engineer) | 212 | 212 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| T. L. Strange, Esq., Judge of Sudder Court (by order of Chief Engineer) | 200 | 200 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Judge Advocate General's Office | ... | ... | ... | ... | 3,000 | 500 | ... | ... | ... | ... | ... | ... |
| General Treasury | ... | ... | ... | ... | 1,250 | 250 | ... | ... | ... | ... | 8,750 | 1,750 |
| Government Savings' Bank | ... | ... | ... | ... | 1,250 | 250 | ... | ... | ... | ... | 8,750 | 1,750 |
| Collectors, through Central Office | ... | ... | 680 | 1,360 | ... | ... | ... | ... | ... | ... | ... | ... |
| District Engineer, Presidency Division (by order of Chief Engineer) | ... | ... | ... | ... | ... | ... | 855 | 285 | ... | ... | ... | ... |
| Madras Medical Journal (by order of Government.) | ... | ... | ... | ... | ... | ... | 4,824 | 3,891 | ... | ... | ... | ... |
| Government House | ... | ... | ... | ... | ... | ... | ... | ... | 1,605 | 1,605 | ... | ... |
| Master Attendant's Office | ... | ... | ... | ... | ... | ... | 20 | 20 | ... | ... | ... | ... |
| Superintendent of Stationery | ... | ... | ... | ... | ... | ... | 200 | 200 | ... | ... | ... | ... |
| Collector of Sea Customs | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5,000 | 1,000 |
| Income Tax Office | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 20,000 | 2,000 |
| Inspector General of Mofussil Police | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5,000 | 1,000 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Auditor of Public Works... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1,000 | 250 |
| Supt. of Family Payments and Pensions... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 17,000 | 3,168 |
| Infantry Volunteer Guards... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3,000 | 500 |
| Military Auditor General's Office... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 10,000 | 2,084 |
| Miscellaneous Works | ... | ... | 80 | 80 | ... | ... | ... | ... | ... | ... | ... | ... |
| Total.... | 59,814 | 66,187 | 19,284 | 25,829 | 91,250 | 16,054 | 14,969 | 15,170 | 6,707 | 11,871 | 2,40,250 | 41,146 |
| Average per month... | 4,984 | 5,515 | 1,607 | 2,152 | 7,604 | 1,337 | 1,247 | 1,264 | 558 | 989 | 20,020 | 3,428 |

MEMORANDUM.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Value of Maps and other Drawings, { 4,647 large sized impressions, at 35 Rupees per 100 impressions, including the cost of Drawing.... | | | | | | | | Rupees | 1,626 | 7 | 2 |
| { 10,523 small sized impressions, at 15 do. per 100 do. do. do. | | | | | | | | ,, | 1,578 | 7 | 2 |
| Value of Circulars and other Forms (executed under emergencies) 11,871 impressions, at 7 Rupees per 100 impressions, including the cost of writing. | | | | | | | | ,, | 830 | 15 | 6 |
| Value of Office Seal Labels 2,40,250 at Rupees 15 per 1,000 Labels.... | | | | | | | | ,, | 3,603 | 12 | 0 |
| Value of Coloring work done in the Department, 177 copies, (being all large Plans, &c.) at an average of 2 Rupees per copy.... | | | | | | | | ,, | 354 | 0 | 0 |
| | | | | | | | | | 7,993 | 9 | 10 |
| Cost of Office Establishment for the official year 1860-61.... | 20,169 | 0 | 0 | | | | | | | | |
| Deduct about two-thirds, being the salaries of the Draftsmen employed in compiling and copying large and elaborate manuscript Maps, &c.... | 13,446 | 0 | 0 | | | | | | | | |
| | | | | 6,723 | 0 | 0 | | | | | |
| Add Contingent expenses incurred in working the Presses, about Rupees.... | | | | 235 | 14 | 4 | | | | | |
| | | | | | | | | | 6,958 | 14 | 4 |
| Balance in favor of the Press by Lithographic and Color work,.... | | | | | | | | | 1,034 | 11 | 6 |

(Signed) J. DUMPHY,

*Superintendent and Manager.*

Government Lithographic Press,
Central Office of Public Works,
Chepauk, 3rd *June* 1861.

No. 4.

*Statement showing the Tools and Implements issued to the different Districts, from* 19*th January* 1860 *to the* 30*th April* 1861.

| Names of Articles. | | Central Office of Public Works. | Madura. | Godavery. | Upper Godavery. | Vizagapatam. | Tanjore. | North Canara. | Cuddapah. | Kurnool. | Total | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adzes, iron, Carpenters' Europe... | No. | 12 | | | | | | | | | 12 | |
| Anvils, Ironsmiths' Europe, 2½ cwt... | „ | | 2 | | | | | | | | 2 | |
| Augers of sizes, Europe... | „ | | 6 | | | | | | | 5 | 11 | |
| Axes, Pick... | Cases. | | | | 2 | | | | | | 2 | |
| Do. Europe...... | No. | | | | | | | 150 | 300 | | 450 | |
| Anvils for portable borges with swage blocks... | „ | | | | | 2 | | | | | 2 | |
| Anvils, Ironsmiths' Europe, 3½ cwt... | „ | | | | | 1 | | 2 | | | 3 | |
| Anvils... | „ | | 2 | | | | | | | | 2 | |
| Bellows, Europe, large... | „ | 2 | | | | | | | | | 2 | |
| Do. 24″... | „ | | | | | | 2 | | | | 2 | |
| Blocks, purchase, wooden... | „ | 2 | | | | | | | | | 2 | |
| Blocks, iron, with 7 chains... | „ | | | | 14 | | | | | | 14 | |
| Blocks, wooden... | Cask. | | | | 1 | | | | | | 1 | |
| Blocks, iron single 6″... | No. | 2 | | | | | | | | | 2 | |
| Do. double 6″... | „ | 2 | | | | | | | | | 2 | |
| Beam Scales to weigh 20 cwt. complete..... | Set. | | | | | 1 | | | | | 1 | |
| Barrows, wheel... | Cases. | | | | 10 | | | | | | 10 | |
| Do.... | No. | | | 50 | | 75 | | | | | 125 | |
| Bores for bolts... | „ | | 3 | | | | | | | | 3 | |
| Chisels, Carpenters' firmer of sizes... | „ | 30 | | | | | | | | | 30 | |
| Chisels, hand... | „ | | 24 | 12 | | | | | | | 36 | |
| Do. cross cut... | „ | | 24 | 12 | | | | | | | 36 | |
| Crank, brace... | „ | | 1 | | | | | | | | 1 | |
| Caulking chisels... | „ | | 4 | | | | | | | | 4 | |
| Crow bars... | „ | | | | | | | 300 | | | 300 | |
| Chisels, Mortice... | „ | | | | | | | | | 8 | 8 | |
| Drills, sorted, of sizes.. | „ | | 6 | 17 | | | | | | | 23 | |
| Files, of sorts... | „ | 732 | 12 | | | | | | | | 744 | |
| Files, pit-saw... | „ | | 6 | | | | | | | | 6 | |
| Files, hand-saw, 6 inches... | „ | | 3 | | | | | | | | 3 | |
| Files, saw-tennon... | „ | | | | | | | | | 6 | 6 | |
| Hammers, riveting... | „ | | 4 | 12 | | | | | | | 16 | |
| Do. hand... | „ | | 4 | 12 | | | | | | | 16 | |
| Do. sledge... | „ | | 4 | | | | | | | | 4 | |
| Do. wrench... | „ | | 1 | | | | | | | | 1 | |
| Hammers... | Set. | | 4 | | | | | | | | 4 | |
| Hand steel punch.. | No. | | 1 | | | | | | | | 1 | |
| Iron tue... | „ | 2 | | | | | | | | | 2 | |
| Large dollies... | „ | | 2 | | | | | | | | 2 | |
| Mandrils... | „ | | 6 | | | | | | | | 6 | |
| Mamooties, 10lb... | „ | | | | | | | 150 | | | 150 | |
| Net cresses... | „ | | 4 | | | | | | | | 4 | |
| Planes, jack... | „ | 10 | | | | | | | | | 10 | |
| Pincers, iron, common... | „ | | 1 | | | | | | | | 1 | |
| Portable forges... | „ | | 2 | 12 | | | | | | | 14 | |
| Portable forges with swage blocks... | „ | | | | | 2 | | | | | 2 | |
| Pit Saw... | „ | | 1 | | | | | | | | 1 | |
| Planes, smoothing... | „ | | | | | | | | | 2 | 2 | |
| Planes, jointers... | „ | | | | | | | | | 2 | 2 | |
| Do. rabbeting... | „ | | | | | | | | | 2 | 2 | |
| Rivet tools... | „ | | | 6 | | | | | | | 6 | |
| Rod punches ½″... | Set. | | 3 | | | | | | | | 3 | |
| Do. ¾″... | „ | | 3 | | | | | | | | 3 | |
| Rakes... | No. | | 2 | 6 | | | | | | | 8 | |
| Rivet tongs... | „ | | 4 | | | | | | | | 4 | |
| Rod chisels... | „ | | 4 | 6 | | | | | | | 10 | |
| Ratchet brace... | „ | | 2 | | | | | | | | 2 | |

No. 4.

*Statement showing the Tools and Implements issued to the different Districts, from* 19*th January* 1860 *to the* 30*th April* 1861.

| Names of Articles. | | Central Office of Public Works. | Madura. | Godavery. | Upper Godavery. | Vizagapatam. | Tanjore. | North Canara. | Cuddapah. | Kurnool. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rod punches... ... ... ... | ... No. | ... | ... | 6 | ... | ... | ... | ... | ... | ... | 6 | |
| Stone-oil, Turkey... ... ... .. | ... „ | 2 | ... | ... | ... | ... | ... | ... | .. | ... | 2 | |
| Spike nails... ... ... ... | ...Cask. | ... | ... | ... | 13 | ... | ... | ... | ... | ... | 13 | |
| Do. ... .. ... ... | ...Cases. | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | |
| Shovels... ... ... .. | ...Bundles. | ... | ... | ... | 80 | ... | ... | ... | ... | ... | 80 | |
| Stocks with dies and taps from 2″ to 1⅜″... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Do. do. from 2½″ to 1⅛″... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | |
| Do. do. from 1″ to ½″... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | |
| Do. do. from ⅜″ to ⅛″... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | |
| Swage blocks... ... ... ... | ...No. | ... | 2 | ... | ... | ... | ... | .. | ... | ... | 2 | |
| Smiths' tongs... ... ... | ...Sorted pair. | ... | 14 | ... | ... | ... | ... | ... | ... | ... | 14 | |
| Shovels... .. ... ... | ...No. | ... | 2 | .. | ... | ... | ... | ... | ... | ... | 2 | |
| Small dollies.. ... ... ... | ... „ | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 2 | |
| Smiths' bellows... ... ... ... | ... „ | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 2 | |
| Tools, Carpenters'... ... ... ... | ...Set. | ... | ... | ... | ... | 1 | .. | ... | ... | ... | 1 | |
| Top and bottom cresses, sorted... ... ... | ...No. | ... | 24 | ... | ... | ... | ... | ... | ... | ... | 24 | |
| Vices, hand iron, Europe... ... ... | ... „ | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Vices, bench do. ... ... ... | ... „ | ... | 2 | ... | ... | ... | .. | ... | ... | ... | 2 | |
| Weights, iron 56 lb... ... ... ... | ... „ | ... | ... | ... | ... | 40 | ... | ... | ... | ... | 40 | |
| Do. 28, 14, 7, 4, 2, 1, ½ lb.. ... | ... „ | ... | ... | ... | ... | 7 | ... | ... | ... | ... | 7 | |
| Do. 4oz ... ... ... ... | ... „ | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | |
| Do. brass 2, 1, ½, ¼ oz... ... | ... „ | ... | ... | ... | ... | 4 | ... | ... | ... | ... | 4 | |

Central Office of Public Works,
Chepauk, 19*th August* 1861.

(Signed) P. CURLEY,
*Superintendent Py. Stores.*

## No. 5.

*Statement showing the Machinery issued for use in the Department of Public Works, from* 1st *May* 1860, *to* 30*th April* 1861.

| Names of Articles. | Vizagapatam. | Godavery. | Kistnah. | Nellore. | Madras. | North Canara. | Bangalore. | Central Office. | Upper Godavery. | Chief Engineer, Singapore. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brick-making machine with Pug Mill, complete | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 2 | |
| Boring apparatus | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Circular Saw and other iron work for wood table | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 1 | 3 | |
| Cranes, two ton | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Cranes, five ton | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | |
| Crabs, single | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | |
| Carriages | ... | ... | ... | ... | ... | ... | ... | ... | 200 | ... | 200 | |
| Crab winches with 4 handles | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | |
| Engine steam, portable, 6 horse-power | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | |
| Do. do. with boiler, 4 horse-power | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | |
| Engine steam, portable, with boiler, 3 horse-power | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | |
| Furnace bars - Set. | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | |
| Jib cranes, 3 ton | ... | ... | ... | ... | ... | ... | ... | ... | 10 | ... | 10 | |
| Jacks, hand (N. P.) Halley's, patent. | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 2 | |
| Liquid manure process | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | |
| Punching and Shearing machine | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | |
| Punts | ... | 26 | 10 | ... | ... | ... | ... | ... | ... | ... | 36 | |
| Plate bending machine for bending Plates, 4 feet wide | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Portable Engine, with fitting | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | 3 | |
| Piping for tubular boiler - Feet. | ... | ... | ... | ... | ... | ... | ... | ... | 20 | ... | 20 | |
| Rails, iron Bridge - R. feet. | 7,920 | ... | ... | 2,000 | ... | 3,000 | ... | ... | ... | ... | 12,920 | |
| Rail wheels and axles - Pair. | ... | ... | ... | ... | ... | ... | ... | ... | 100 | ... | 100 | |
| Saw table | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | |
| Steam Engine gauge | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | |
| Screw Jacks | ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 4 | |
| Steam Tug | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Tile-making machine, with pug mill, complete | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 2 | |
| Travelling cranes, 5 ton with trucks, wheel, &c. | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | |
| Tubular boilers with forced combustion apparatus to each boiler | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | |
| Tubes for each boiler | ... | ... | ... | ... | ... | ... | ... | ... | 12 | ... | 12 | |
| Weighing machine | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 2 | |
| Wood jib crane, 5 ton | ... | ... | ... | ... | ... | ... | ... | ... | 4 | ... | 4 | |

Central Office of Public Works,
Chepauk, 19*th August* 1861.

(Signed) P. CURLEY,
*Superintendent Py. Stores.*

## No. 6.

*Statement showing the number of Scientific Instruments, Color Boxes, &c., issued to the several Districts for use of the Department of Public Works, from 1st May 1860 to 31st April 1861.*

| Names of Articles. | Bellary. | North Canara. | Madras. | Coimbatore. | Cuddapah. | Godavery. | Upper Godavery. | Kistnah. | Madura. | Trichinopoly. | Nellore. | Salem. | Vizagapatam. | Presidency. | Tinnevelly. | Issued to other Depts. on payment. | Central Office of Public Works. | H. M.'s Observatory. | Board of Revenue. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aneroid Barometer... | | 1 | | | | | 1 | | | | | | 1 | 2 | 2 | | 1 | | | 8 | |
| Barometer, mountain... | | | | | | | | | | | | | | | 2 | | | | | 2 | |
| Boileau's Traverse table | | | | | | | 1 | | | | | | | | | | | | | 1 | |
| Circumferentors with stand | | | | 2 | | | | | | | | | | | | 2 | | | | 4 | |
| Compasses, prismatic, with stand | 1 | | | 2 | | | 1 | | | | | | 1 | | | | 1 | | | 6 | |
| Do. comprehensive | | | | 2 | | 1 | | | | | | | | | | | | | | 3 | |
| Clinometer | | | | | | 1 | 1 | | | | | | | | | | | | | 2 | |
| Compasses, Beam | | | | | | | | 1 | | | | | | | | 1 | | | | 2 | |
| Do. do. small | | | | | | | | | | | | | | | | | 1 | | | 1 | |
| Color Boxes, large... | 1 | | | 2 | | | | | | 1 | | | | | | 1 | 1 | | | 6 | |
| Color Boxes, small... | 3 | | | | | | 1 | | | | | | | | | | 1 | | | 5 | |
| Compasses Brass, fine points | | | | | | | | | | 1 | | | | | | 6 | 15 | | | 22 | |
| Chain, measuring 100 feet | 1 | | | 2 | | | | | | 1 | | | 2 | | | 4 | 1 | | | 11 | |
| Compasses, proportional | | | | | | | | | | 1 | | | | | | 1 | | | | 2 | |
| Eidographs... | | | | | | | | | | | | | | | | | 1 | | | 1 | |
| French curves, large... | | | | | | 1 | | | | | | | | | | | | | | 1 | |
| Do. small... | | | | | | 1 | | | | | | | | | | | | | | 1 | |
| Folding Rules, 2 feet .. | | | | | | | | | | | | | | | | | 2 | | | 2 | |
| Holtzaphiell's scales... | | | | | | 3 | | | | | | | | | | | 1 | | | 4 | |
| Horizons, artificial... | | | | | | | | | | | | | | | 1 | | | | | 1 | |
| Hutton's Mathematical Table... | | | | | | | 1 | | | | | | | | 2 | | 1 | | | 4 | |
| Levelling Instruments, Dumpy, with stand... | | | | 2 | | | | | | | | 1 | | | | 1 | | | | 4 | |
| Do. Y 15" complete do | | | | | | | | | | | | | | | | 1 | | | | 1 | |
| Do. 2nd Class, with stand.. | | | | | | | | | | | | | | | | 4 | | | | 4 | |
| Do. Y 12" with stand | 1 | | | | | | | | | 1 | | | | | | | | | | 2 | |
| Levelling Instrument, Troughton... | | | | | | | | | | | | | | | | | 1 | | | 1 | |
| Mathematical Instrument Box, brass bound, 1st sort | | | | | | | | | | | | | | | | 1 | 1 | | | 2 | |
| Do. do. 2nd sort | | | | 2 | | 1 | | 2 | 2 | 1 | | 1 | | | | | | | | 9 | |
| Do. do. case F. skin 2nd sort... | 3 | | | | | | | | | | | | | | | | 1 | | | 4 | |
| Do. do. do. 4th sort | | | | | | | | | | | | | | | | 2 | | | | 2 | |
| Nautical Almanac... | | | | | | | | | | | | | 1 | | | | | | | 1 | |
| Parallel Ruler, brass 18" | | | | | | | | | | | | | | | | 3 | | | | 3 | |
| Do. 12" | | | | | | | | | | | | | | | | 4 | | | | 4 | |
| Do. ebony 24" | 1 | | | | | | | | | 1 | | | | | | 1 | | | | 3 | |
| Do. 12" | | | | | | | | | | 1 | | | | | | | | | | 1 | |
| Do. 18" | 1 | | | | | | | | | | | | | | | 1 | 1 | | | 3 | |
| Do. ebony 18" ivory edged... | | | | | | | 1 | | | | 1 | | | | | | | | | 2 | |
| Protractors, brass, semicircular. | | | | 2 | | | | | | | | | | | | 2 | | | | 4 | |
| Do. circular | | | | | | | | | | | | | | | | | 1 | | | 1 | |
| Do. ivory 8" | 1 | | | | | | | | | 1 | | | | | | | | | | 2 | |
| Planimeter... | | | | | | | | | | | | | | | | | 1 | | | 1 | |
| Pocket Sextants... | | | | | | | 1 | | | | | | | | 2 | | | | | 3 | |
| Plotting scales, boxwood Set. | | | | 2 | | | | | | 1 | | | | | | | 2 | | | 5 | |
| Quadrant, Gunners' | | 4 | | | | | | | | | | | 3 | | | | | | | 7 | |
| Reflecting semicircle... | | | | | | | | | | | | | | | 1 | | | | | 1 | |

No. 6.—(*Continued.*)

*Statement showing the number of Scientific Instruments, Color Boxes, &c., issued to the several Districts for use of the Department of Public Works, from 1st May 1860 to 31st April 1861.*

| Names of Articles. | Bellary. | North Canara. | Madras. | Coimbatore. | Cuddapah. | Godavery. | Upper Godavery. | Kistnah. | Madura. | Trichinopoly. | Nellore. | Salem. | Vizagapatam. | Presidency. | Tinnevelly. | Issued to other Depts. on payment. | Central Office of Public Works. | H. M.'s Observatory. | Board of Revenue. | Total. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rain gauges, Crossley's ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .... | ...... | ... | 1 | 1 | |
| Squares, T ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...... | ...... | ... | ... | 2 | |
| Spare Drawing Pens... ... | ... | ... | 12 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...... | 10 | .. | ... | 22 | |
| Squares, Optical... .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .... | 1 | ... | ... | 1 | |
| Straight edges, ebony, 3 feet with brass edge... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...... | 1 | ... | ... | 1 | |
| Spirit levels, 6" brass... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | ... | 6 | 1 | ... | ... | 10 | |
| Scales, Marquois' Set... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | .. | 3 | |
| Staves, levelling... ... | 2 | ... | ... | 4 | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 6 | 2 | ... | ... | 16 | |
| Tapes, measuring 100 feet ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | 4 | ... | ... | 9 | 3 | ... | .. | 19 | |
| Do. 50 ,, ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 3 | ...... | ... | ... | 5 | |
| Theodolite, 5½" ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | 1 | ... | ... | 1 | ...... | ...... | ... | ... | 2 | |
| Do. 7½" ... ... ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...... | ...... | 1 | ... | 2 | |
| Thermometers, standard... ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ...... | 1 | ... | ... | 4 | |
| Do. maximum and minimum ... ... ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ...... | ... | ... | 3 | |
| Do. wet and dry | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ...... | ...... | ... | ... | 2 | |

Central Office of Public Works,
Chepauk, 19*th August* 1861.

(Signed) P. CURLEY,
*Superintendent Py. Stores.*

No. 7.

*Statement of Remunerative Works for* 1859-60.

| Name of Work. | Capital. Outlay on Construction (Dead Stock valuation.) | | | | Revenue. Charges. | | | | Revenue. Income. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | Description. | Amount up to the end of the past year. | Amount for the current year. | Total | Description. | Amount up to the end of the past year. | Amount for the current year. | Total. |
| | | RS. | RS. | RS. | | RS. | RS. | RS. | | RS. | RS. | RS. |
| Godavery anicut and its subsidiary works, including the late Rajahmundry and Masulipatam portions. | Outlay on original work and re-construction……… | 33,26,879 | 71,835 | 33,98,714 | Interest on capital, Rs. 33,26,879, at 4 per cent……… | 8,00,374 | 1,33,075 | 9,33,449 | Gross proceeds from all sources…. … | 70,65,947 | 12,72,771 | 83,38,718 |
| | Deduct deterioration by wear and tear… ……… | 1,53,763 | 33,268 | 1,87,031 | Maintenance and repairs…………… | 16,31,499 | 1,84,872 | 18,16,371 | | | | |
| | | | | | Total….. | 24,31,873 | 3,17,947 | 27,49,820 | | | | |
| | Balance of capital. | 31,73,116 | 38,567 | 32,11,683 | Balance of charges. | … | … | … | Balance of income. | 46,34,074 | 9,54,824 | 55,88,898 |
| Kistna anicut project. | Outlay on original work and re-construction… … … | 15,34,864 | 1,49,694 | 16,84,558 | Interest on capital, Rs. 15,34,864, at 4 per cent……… | 2,31,907 | 61,395 | 2,93,302 | Gross proceeds from all sources… …. | 5,47,494 | 2,73,870 | 8,21,364 |
| | Deduct deterioration by wear and tear…… ……… | 1,09,552 | 30,697 | 1,40,249 | Maintenance and repairs…………… | 1,53,709 | 61,949 | 2,15,658 | | | | |
| | | | | | Total….. | 3,85,616 | 1,23,344 | 5,08,960 | | | | |
| | Balance of capital. | 14,25,312 | 1,18,997 | 15,44,309 | Balance of charges. | … | … | … | Balance of income | 1,61,878 | 1,50,526 | 3,12,404 |

*Statement of Remunerative Works for 1859-60. (Continued.)*

| Name of Work. | Capital. Outlay on Construction (Dead Stock valuation). Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | Revenue. Charges. Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | Income. Description. | Amount up to the end of the past year. | Amount for the current year. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RS. | RS. | RS. | | RS. | RS. | RS. | | RS. | RS. | RS. |
| Pennair anicut works in the Nellore District. | Outlay on original work and re-construction......... | 1,83,281 | 44,767 | 2,28,048 | Interest on capital, Rs. 1,83,281, at 4 per cent........ | 21,897 | 7,331 | 29,228 | Gross proceeds from all sources........ | 53,841 | ... | 53,841 |
| | Deduct deterioration by wear and tear.................. | 53,500 | ... | 53,500 | Maintenance and repairs ............ | 9,532 | 1,056 | 10,588 | | | | |
| | | | | | Total...... | 31,429 | 8,387 | 39,816 | | | | |
| | Balance of capital. | 1,29,781 | 44,767 | 1,74,548 | Balance of charges. | ... | ... | ... | Balance of income. | 22,412 | ... | 14,025 |
| Bachagondanahully anicut in the District of Bellary. | Outlay on original work and re-construction.......... | 17,098 | 487 | 17,585 | Interest on capital, Rs. 17,585, at 4 per cent.......... | 1,374 | 683 | 2,057 | Gross proceeds from all sources ........ | 2,416 | 1,658 | 4,074 |
| | Deduct deterioration by wear and tear.................. | 5,621 | ... | 5,621 | Maintenance and repairs............ | 1,475 | 1,796 | 3,271 | | | | |
| | | | | | Total...... | 2,849 | 2,479 | 5,328 | | | | |
| | Balance of capital. | 11,477 | 487 | 11,964 | Balance of charges. | 433 | 821 | 1,254 | Balance of income. | ... | ... | ... |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Palar anicut project in the District of Madras. | Outlay on original works and re-construction… … .. | 38,953 | 330 | 39,283 | Interest on capital, Rs. 39,283, at 4 per cent… … … | 4,526 | 1,558 | 6,084 | Gross proceeds from all sources… … | 29,659 | 7,154 | 36,813 |
| | Deduct deterioration by wear and tear… … … | … | … | … | Maintenance and repairs… … … | … | … | … | | | | |
| | Balance of capital. | 38,953 | 330 | 39,283 | Balance of charges. | … | … | … | Balance of income. | 25,133 | 5,596 | 30,729 |
| Coratoor anicut. | Outlay on original works and re-construction… … … | 16,257 | 173 | 16,430 | Interest on capital, Rs. 16,430, at 4 per cent… … … | 2,601 | 650 | 3,251 | Gross proceeds from all sources… .. … | 51,631 | } 27,883 | 79,514 |
| Casaveram anicut. | Do. | 16,854 | 3,462 | 20,316 | Interest on capital, Rs. 20,316, at 4 per cent… … … | 1,524 | 674 | 2,198 | Do. | … | | |
| | Deduct deterioration by wear and tear… … … | … | … | … | Maintenance and repairs… … … | … | … | … | | | | |
| | | | | | Total… … | 4,125 | 1,324 | 5,449 | | | | |
| | Balance of capital. | 33,111 | 3,635 | 36,746 | Balance of charges. | … | … | … | Balance of income. | 47,506 | 26,559 | 74,065 |
| Eastern Coast Canal. | Outlay on original works and re-construction… … … | 4,97,417 | … | 4,97,417 | Interest on capital, Rs. 4,97,417, at 4 per cent… … … | 39,603 | 19,896 | 59,499 | Gross proceeds from all sources… … | 6,31,617 | 31,795 | 6,63,412 |
| | Deduct deterioration by wear and tear… … … | … | … | … | Maintenance and repairs… … … | 1,52,306 | 19,475 | 1,71,781 | | | | |
| | | | | | Total… … | 1,91,909 | 39,371 | 2,31,280 | | | | |
| | Balance of capital. | 4,97,417 | … | 4,97,417 | Balance of charges. | … | 7,576 | … | Balance of income. | 4,39,708 | … | 4,32,132 |

*Statement of Remunerative Works for 1859-60.—(Continued.)*

| Name of Work. | Capital. Outlay on Construction (Dead Stock valuation). Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | Revenue. Charges. Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | Income. Description. | Amount up to the end of the past year. | Amount for the current year. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RS. | RS. | RS. | | RS. | RS. | RS. | | RS. | RS. | RS. |
| Palar anicut in the District of North Arcot. | Outlay on original works and re-construction... ... ... | 5,39,946 | ... | 5,39,946 | Interest on capital, Rs. 5,39,946, at 4 per cent.. ..... | 58,809 | 21,598 | 80,407 | Gross proceeds from all sources........ | 12,373 | 3,706 | 16,079 |
| | Deduct deterioration by wear and tear, &c. .. ...... | ... | ... | ... | Maintenance... .... | 2,100 | 938 | 3,038 | | | | |
| | | | | | Total...... | 60,909 | 22,536 | 83,445 | | | | |
| | Balance of capital. | 5,39,946 | ... | 5,39,946 | Balance of charges. | 48,536 | 18,830 | 67,366 | Balance of income. | ... | ... | ... |
| Ponnie anicut in the District of North Arcot. | Outlay on original construction.. ... | 47,481 | 281 | 47,762 | Interest on capital, Rs. 47,481, at 4 per cent... ... ... | 5,619 | 1,899 | 7,518 | Gross proceeds from all sources.... .... | 3,789 | 854 | 4,643 |
| | Deduct deterioration by wear and tear, &c... ... .. | ... | ... | ... | Maintenance........ | 2,500 | 750 | 3,250 | | | | |
| | | | | | Total..... | 8,119 | 2,649 | 10,768 | | | | |
| | Balance of capital. | 47,481 | 281 | 47,762 | Balance of charges. | 4,330 | 1,795 | 6,125 | Balance of income. | ... | ... | ... |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cheyar anicut in the District of North Arcot. | Outlay on original construction. ... | 12,088 | ... | 12,088 | Interest on capital, Rs. 12,088, at 4 per cent... ... ... | 1,356 | 484 | 1,840 | Gross proceeds from all sources... ... | 20,195 | 3,014 | 23,209 |
| | Deduct deterioration by wear and tear, &c... ... ... | ... | ... | ... | Maintenance... ... | 1,656 | 1,895 | 3,551 | | | | |
| | | | | | Total..... | 3,012 | 2,379 | 5,391 | | | | |
| | Balance of capital. | 12,088 | ... | 12,088 | Balance of charges. | ... | ... | ... | Balance of income. | 17,183 | 635 | 17,818 |
| Lower Coleroon anicut in the District of South Arcot. | Outlay on original work and re-construction ......... | 1,29,050 | ... | 1,29,050 | Interest on capital, Rs. 1,29,050, at 4 per cent ...... | 1,08,402 | 5,162 | 1,13,564 | Gross proceeds from all sources... ... | 54,57,967 | 3,35,320 | 57,93,287 |
| | Deduct deterioration by wear and tear................ | 12,581 | ... | 12,581 | Maintenance and repairs.......... | 3,98,297 | ... | 3,98,297 | | | | |
| | | | | | Total..... | 5,06,699 | 5,162 | 5,11,861 | | | | |
| | Balance of capital. | 1,16,469 | ... | 1,16,469 | Balance of charges. | ... | ... | ... | Balance of income. | 49,51,268 | 3,30,158 | 52,81,426 |
| Vellaur anicut in the District of South Arcot. | Outlay on original work and re-construction... ...... | 94,037 | ... | 94,037 | Interest on capital, Rs. 94,037, at 4 per cent... ... ... | 37,614 | 3,761 | 41,375 | Gross proceeds from all sources... .... | 7,47,215 | 75,609 | 8,22,824 |
| | Deduct deterioration by wear and tear, &c... .. ... | 11,881 | ... | 11,881 | Maintenance and repairs........... | 99,879 | 1,500 | 1,01,379 | | | | |
| | | | | | Total...... | 1,37,493 | 5,261 | 1,42,754 | | | | |
| | Balance of capital. | 82,156 | ... | 82,156 | Balance of charges. | ... | ... | ... | Balance of income. | 6,09,722 | 70,348 | 6,80,070 |

*Statement of Remunerative Works for 1859-60.—(Continued.)*

| Name of Work. | CAPITAL. Outlay on Construction (Dead Stock valuation). | | | | REVENUE. Charges. | | | | REVENUE. Income. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | Description. | Amount up to the end of the past year. | Amount for the current year. | Total. |
| | | RS. | RS. | RS. | | RS. | RS. | RS. | | RS. | RS. | RS. |
| Ragavien channel in the District of South Arcot. | Outlay on original works......... | 13,603 | ... | 13,603 | Interest on capital, Rs. 13,603, at 4 per cent... ...... | 5,441 | 544 | 5,985 | Gross proceeds from all sources.... ... | 2,66,461 | 29,659 | 2,96,120 |
| | Deduct deterioration by wear and tear, &c... ... ... | 6,160 | ... | 6,160 | Maintenance, &c... | 5,920 | 4,652 | 10,572 | | | | |
| | | | | | Total...... | 11,361 | 5,196 | 16,557 | | | | |
| | Balance of capital. | 7,443 | ... | 7,443 | Balance of charges. | ... | ... | ... | Balance of income.. | 2,55,100 | 24,463 | 2,79,563 |
| Piruvadi anicut in the District of South Arcot. | Outlay on original work......... .... | 13,729 | ... | 13,729 | Interest on capital, Rs. 13,729, at 4 per cent... ... ... | 5,491 | 549 | 6,040 | Gross proceeds from all sources........ | 2,62,540 | 22,060 | 2,84,600 |
| | Deduct deterioration by wear and tear, &c......... | 2,274 | ... | 2,274 | Maintenance, repairs, &c... ...... | 2,232 | 920 | 3,152 | | | | |
| | | | | | Total...... | 7,723 | 1,469 | 9,192 | | | | |
| | Balance of capital. | 11,455 | ... | 11,455 | Balance of charges. | ... | ... | ... | Balance of income. | 2,54,817 | 20,591 | 2,75,408 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vicravandi anicut in the District of South Arcot. | Outlay on original construction.. ... | 15,016 | ... | 15,016 | Interest on capital, Rs. 15,016, at 4 per cent... ... ... | 2,194 | 601 | 2,795 | Gross proceeds from all sources......... | 7,270 | 5,340 | 12,610 |
| | Deduct deterioration by wear and tear............... | 1,300 | ... | 1,300 | Maintenance, &c... | 2,860 | 2,208 | 5,068 | | | | |
| | | | | | Total ..... | 5,054 | 2,809 | 7,863 | | | | |
| | Balance of capital. | 13,716 | ... | 13,716 | Balance of charges. | ... | ... | ... | Balance of income. | 2,216 | 2,531 | 4,747 |
| Upper Coleroon anicut in the District of Tanjore. | Outlay on original works and re-construction....... .. | 2,39,865 | ... | 2,39,865 | Interest on capital, Rs. 2,39,865, at 4 per cent....... | 1,72,726 | 9,594 | 1,82,319 | Gross proceeds from all sources.. ... | 97,58,941 | 5,30,591 | 102,89,532 |
| | Deduct deterioration by wear and tear.......... ..... | ... | ... | ... | Maintenance, &c... | 1,39,114 | 14,896 | 1,54,010 | | | | |
| | | | | | Total...... | 3,11,838 | 24,490 | 3,36,329 | | | | |
| | Balance of capital. | 2,39,865 | ... | 2,39,865 | Balance of charges. | ... | ... | .. | Balance of income. | 94,47,103 | 5,06,101 | 99,53,203 |
| Lower Coleroon anicut in the District of Tanjore. | Outlay on original works and re-construction......... | 2,25,190 | ... | 2,25,190 | Interest on capital, Rs. 2,25,190, at 4 per cent...... | 64,201 | 9,008 | 73,209 | Gross proceeds from all sources....... | 2,95,059 | 17,906 | 3,12,965 |
| | Deduct deterioration by wear and tear............ ... | ... | ... | ... | Maintenance, &c... | 90,119 | 11,692 | 1,01,811 | | | | |
| | | | | | Total...... | 1,54,320 | 20,699 | 1,75,020 | | | | |
| | Balance of capital. | 2,25,190 | ... | 2,25,190 | Balance of charges. | ... | 2,793 | ... | Balance of income. | 1,40,739 | ... | 1,37,945 |

*Statement of Remunerative Works for 1859-60.—(Continued.)*

| Name of Work. | CAPITAL. Outlay on Construction (Dead Stock valuation). Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | REVENUE. Charges. Description. | Amount up to the end of the past year. | Amount for the current year. | Total. | REVENUE. Income. Description. | Amount up to the end of the past year. | Amount for the current year. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RS. | RS. | RS. | | RS. | RS. | RS. | | RS. | RS. | RS. |
| Kaniempolliam anicut in the District of Coimbatore. | Outlay on original works and re-construction... ... ... | 42,970 | ... | 42,970 | Interest on capital, Rs. 42,970, at 4 per cent...... | 53,283 | 1,719 | 55,002 | Gross proceeds from all sources... ... | 31,373 | 741 | 32,114 |
| | Deduct deterioration by wear and tear, &c...... ... | ... | ... | .. | Maintenance, &c... | 10,989 | 975 | 11,964 | | | | |
| | | | | | Total...... | 64,272 | 2,694 | 66,966 | | | | |
| | Balance of capital. | 42,970 | ... | 42,970 | Balance of charges. | 32,899 | 1,953 | 34,852 | Balance of income. | ... | ... | ... |
| Coompta and Dharwar line, viâ Devamany and Arbyle Ghats in the District of Canara. | Outlay on original works and re-construction... ... ... | 2,34,081 | ... | 2,34,081 | Interest on capital, Rs. 2,34,081, at 4 per cent...... | 28,090 | 9,363 | 37,453 | Gross proceeds from all sources... ... | 21,943 | 7,160 | 29,102 |
| | Deduct deterioration by wear and tear...... ...... | ... | ... | ... | Maintenance, &c... | 1,53,946 | 42,049 | 1,95,995 | | | | |
| | | | | | Total...... | 1,82,036 | 51,412 | 2,33,448 | | | | |
| | Balance of capital. | 2,34,081 | ... | 2,34,081 | Balance of charges. | 1,60,093 | 44,252 | 2,04,346 | Balance of income. | ... | ... | ... |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yennamakol dam in the District of Malabar. | Outlay on original works and re-construction… … … | 30,880 | … | 30,880 | Interest on capital, Rs. 30,880, at 4 per cent… … … | 18,528 | 1,235 | 19,763 | Gross proceeds from all sources… … | 24,401 | 2,789 | 27,190 |
| | Deduct deterioration by wear and tear…… ……… | 7,412 | 618 | 8,029 | Maintenance, &c… | 4,106 | 1,105 | 5,211 | | | | |
| | | | | | Total…… | 22,634 | 2,340 | 24,974 | | | | |
| | Balance of capital. | 23,468 | 618 | 22,851 | Balance of charges. | … | … | … | Balance of income. | 1,767 | 449 | 2,216 |

Central Office of Public Works,
Chepauk, 30*th September* 1861.
No. 344.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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Order thereon, 28th November 1861, No. 2,191.

Ordered to lie over.

(True Extract.)

(Signed) J. D. SIM,
*Secretary to Government.*

No. 345. Read the following Endorsement of the Chief Engineer, dated Chepauk, 15th November 1861, No. 7,223.

Read the following letter from Captain W. C. PALMER, Acting District Engineer Trichinopoly, to Lieutenant-Colonel W. I. BIRDWOOD, Deputy Chief Engineer, Southern Circle, dated Trichinopoly, 2nd November 1861, No. 1,126 :—

SIR,

1. In reply to Proceedings 6,618 of the 30th ultimo, I have the honor to report that I am very desirous that the services of Sub-Overseer Veeramalay should be continued to the District, and that he should be permanently appointed to the Department.

2. His past conduct has been very satisfactory; both Lieutenant Mead and Mr. Bateman, under whom he has been more immediately employed, speak very highly of the careful and correct way in which he has always conducted the duties entrusted to him, and they state that he is a very useful and trustworthy executive agent, in which opinion I fully concur.

3. I have had no application for the vacancy from any passed Candidates although my advertisement appeared in the Gazette for nine months, and in consideration of his efficiency and the loss of his appointment as Sub-Overseer, 3rd Class, by the reduction of the Department in July 1857, I trust you will be pleased to confirm him in the Department as Sub-Overseer 2nd Class, 3rd Grade.

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1. Submitted to Government, with the Chief Engineer's recommendation that, under the circumstances represented by the District Engineer Trichinopoly, sanction may be granted for the continued employment of temporary Sub-Overseer Veeramalay, until the services of a passed Candidate are available to fill permanently the post in which he is now officiating.

2. Veeramalay was originally entertained as temporary Sub-Overseer, 2nd Class, 3rd Grade, for six months on the 10th November 1860, on the authority conveyed in the Proceedings of this Office, No. 7,644, dated 5th December following, and his employment for a further period of six months was sanctioned by Government in their Orders No. 1,245, dated 4th July 1861.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 346. ORDER THEREON, 28th November 1861, No. 2,192.

On the strong recommendation of the District Engineer, supported by the Chief Engineer, the Government are pleased to permit the continued employment for twelve months longer of Veeramalay as a Sub-Overseer of the 2nd Class, 3rd Grade, in the Trichinopoly District, provided the services of a passed Candidate are not intermediately available.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 347. Read the following Endorsement of the Chief Engineer, dated Chepauk, 9th November 1861, No. 6,989 :—

Read the following letter from Captain E. H. HARINGTON, District Engineer Ganjam, to Lieutenant-Colonel F. H. RUNDALL, Acting Deputy Chief Engineer, Northern Circle, dated Berhampore, 17th October 1861, No. 214.

SIR,

1. Government, in Order 13th August 1859, No. 1,949, sanctioned the construction of certain roads in connection with the Nowpadah and Omeravilly Salt Pans in the Ganjam District.

2. They have been completed as per enclosed Statement, but I have still to submit the estimate called for in paragraph 2 of the Government Order for the road from Bomally to Juggernautpooram on the Chicacole and Palcondah road.

3. The construction of the sanctioned roads was so much retarded by limitation of funds and restriction of expenditure in 1859-60, that for some time I felt it useless to propose further expenditure on additional roads. As it is, I regret to state that the largest grant of funds which I can hope for in 1862-63, will not provide for the execution of many important projects which have either been sanctioned or have, by order, been submitted for sanction.

4. However, I propose to forward an estimate for the road in question in a short time. The line has been examined; and as the monsoon is now nearly over, I will cause the survey to be made, when the country is practicable for field operations.

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GANJAM DISTRICT.

SALT ROADS TO NOWPADAH AND OMERAVILLY PANS.

| Description of work. | Estimate. | Date of sanction. | Cost. | Remarks. |
|---|---|---|---|---|
| Road from Nowpadah Salt Pans to Teckully. | 5,330 | 19th November 1857, & 13th Aug. 1859. | 5,067 | Completed, 24th December 1860. |
| Road from Nowpadah Salt Pans to Bomally. | 10,500 | 13th August 1859. | 10,745 | Completed, 26th December 1860. |
| S. E.... | 245 | 15th December 1860. | | |
| Road from Omeravilly Salt Pans to join the Chicacole and Calingapatam road. | 4,400 | Do. | 4,399 | Completed, 15th February 1861. |
| Road from Teckully to Malapettah. (Government boundary.) | 9,060 | 9th September 1859. | 9,017 | Completed, 14th February 1861. |
| Road from Malapettah near Kimedy to the Kimedy frontier, en route to Nowpadah. (In Kimedy Zemíndári.) | 9,300 | 5th January 1859, by Court of Wards. | 9,359 | Completed, 5th March 1861. |

Berhampore,
17th October 1861.

(Signed) E. H. HARINGTON, Captain,
*District Engineer, Ganjam.*

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1. Submitted to Government, with reference to paragraph 6 of Chief Engineer's letter No. 5,751, dated 9th October 1861.

2. It will be observed that the whole of the Salt roads in Ganjam sanctioned by Government have been completed, and the estimate for extending the road from Bomally to Juggernautpooram on the Chicacole and Palcondah road will be shortly forwarded. The line has been examined, and the survey will be made as soon as the monsoon is over.

(Signed) W. H. HORSLEY, Lieut.-Colonel,
*Chief Engineer.*

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No. 348. ORDER THEREON, 28th November 1861, No. 2,193.

The Government will await the promised estimate for the road from Bomally to Juggernautpooram.

(Signed) J. D. SIM,
*Secretary to Government.*

No. 349. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 13th November 1861, No. 7,167:—

SIR,

From District Engineer, Tinnevelly, dated 3rd June 1861.
Do. do. do. dated 3rd August 1861, No. 95, with one accompaniment.
Do. do. do. dated 1st October 1861, No. 145, with three accompaniments.
Do. do. do. dated 7th October 1861, No. 152.
Do. do. do. dated 20th November 1860, No. 120, with one accompaniment.
Do. do. do. dated 27th November 1860, No. 130.
Proceedings to do. dated 11th December 1860, No. 7,860.

1. I have the honor to submit for the orders of Government letters, as per margin, from the District Engineer of Tinnevelly bringing to notice the apathy and negligence evinced by Mr. Bush, 2nd Assistant District Engineer, in the discharge of his duties from the time he joined that District in August 1860.

In letter No. 95, dated 3rd August 1861.

2. Captain Winscom states that up to the end of June 1861, the average amount expended by Mr. Bush on Public Works during that and the previous ten months was Rupees 486 per month. In May it was only Rupees 87, and in September last the value of work executed by him was Rupees 265-4-5.

3. Captain Winscom further reports that the estimates prepared by Mr. Bush have been so long extravagantly drawn up, both as regards the work to be done and the rates allowed, that he has scarcely dared to sanction any of them without previously inspecting, and, in some cases, measuring the tanks to which they referred.

Joined 22nd August 1860.
Left 29th November 1860.

4. With reference to the first complaint Mr. Bush explains, that when he joined the Tinnevelly District and took charge of No. 2 Range, it was then the rainy season, and that though he had not in consequence any opportunity while there of carrying on work, he prepared a large number of estimates which are now in course of execution. Subsequently, in January 1861, he was placed in charge of No. 3 Range, since when he represents it was impossible for him, owing to rain and to the restrictive orders relating to expenditure, to lay out a larger sum than he has done. Mr. Bush further states that the Subordinates in No. 3 Range have been frequently removed and transferred during the time he has held charge of it, and that much delay occurred between March and May last, in the sanction of estimates which he had submitted in the former month to the District Engineer for works requiring repair.

5. This explanation appears from Captain Winscom's remarks thereon to be partly incorrect. That Officer states that rain did not fall in No. 2 Range until the 7th December 1860, or upwards of three months after Mr. Bush took charge of it, and that the estimates were prepared by Mr. Bush's private assistant on very high rates, and required revision before they could be sanctioned or carried out.

6. As regards that portion of Mr. Bush's explanation which relates to No. 3 Range I observe from Captain Winscom's letter of the 3rd August 1861, No. 95, that there were many works not affected by the restrictive orders which Mr. Bush might easily have had repaired, notwithstanding the frequent removal of Subordinates and the delay which took place in consequence of a mistake on the part of the District Engineer to sanction the estimates and others.

7. As respects the second complaint, Mr. Bush states, 1st, that in preparing his estimates he was guided by the rates usually given in the range and the records left by the Officers formerly in charge of it; 2nd, that the District Engineer never measured the whole of the works estimated for, and 3rd, that it was not possible to get work done at the low rate fixed by the District Engineer.

8. The correctness of this statement, Captain Winscom also impeaches, as will be observed from his remarks entered opposite to paragraphs 19, 20 and 21 of Mr. Bush's letter of the 26th September 1861, No. 83.

9. Mr. Bush concludes his letter by asserting that the proceedings of Captain Winscom towards him have been marked with vindictiveness and want of humanity. This, however, the latter denies, and refers as a proof to the contrary to his letter of the 27th November 1860, No. 130, wherein the circumstances under which he found it necessary to transfer Mr. Bush to No. 3 Range are given in detail.

10. The foregoing are the chief features of the case both for and against Mr. Bush, and upon a careful consideration of the whole particulars connected therewith furnished in the accompanying papers, I have arrived at the conclusion that he has failed to give anything like a satisfactory explanation of his conduct as complained of by Captain Winscom. Delay certainly did occur, as admitted by that Officer, in the sanction of certain estimates, and it may not have been possible for Mr. Bush to have proceeded with the repairs of the river fed tanks, but he might and should have carried out other works for the execution of which there existed no prohibition. The work performed under his superintendence while in charge of No. 2 Range was also most discreditable to him, and I feel constrained to say that whatever he might have formerly been, he has for some time past fallen far short of what is required of him as an Executive Officer.

11. Mr. Bush joined the Public Works Department as an Assistant Overseer in 1851; some time afterwards he rose to the grade of Sub-Assistant Revenue Surveyor, and in April 1855 he was promoted to the rank of Assistant Engineer. Up to 1857 his conduct seems to have been good; but in 1858 serious charges affecting his probity and fitness for continued employment were preferred against him; their investigation extended to the end of that year. In Extract Minutes Consultation No. 1,158, dated 18th June 1858, the Chief Engineer was desired to communicate to him the censure of Government on account of the gross irregularities and carelessness which had marked the whole of his proceedings in North Arcot in connection with his accounts, and in a subsequent Order, No. 2,620, dated 4th December 1858, the Government remarked that the report on Mr. Bush's accounts entirely exonerated him from all imputation of dishonesty or unfair dealing, but at the same time they authorized his removal to the Coimbatore District.

Vide Extract Minutes Consultation No. 784, dated 27th April 1858.
Do. No. 1,758, dated 28th August 1858.
Paragraph 7.

12. While in Coimbatore Mr. Bush's conduct was again unfavorably noticed by Government, and since he left that District he has been accused by the present District Engineer, Captain Goddard, of having charged in his accounts, for work in connection with the Vongul Groynes which had not been performed. This matter is still under investigation, and will be reported upon separately to Government.

Proceedings of Government, dated 8th September 1859, No. 2,157.

13. When transferred to the Tinnevelly District he did not take up his appointment until one month and twenty-four days beyond the time allowed by the rules for joining, and within a few months after his arrival there he was reported to have introduced into his Office three private Writers from Madras, which to say the least of it bore a very suspicious appearance, and to have attended both to his out-door and office work in a very unsatisfactory manner. In consequence, however, of his having freely acknowledged his error, I,* on the recommendation of the District Engineer, authorized his transfer to another range where he would be more under supervision, but at the same time warned him that in the event of his conduct being again brought unfavorably to my notice it would be reported to Government.

In May 1860.
Procs. of Government, dated 16th August 1860, No. 1,746.
Do. 4th September 1860, No. 1,866.
In letter from Dist. Engr., dated 20th Nov. 1860, No. 120.
Do. 27th " " " 133.

* In Proceedings, dated 11th December 1860, No. 7,860.

14. From this account of Mr. Bush's career during the last $3\frac{1}{2}$ years it will be evident I think that he is unworthy of holding so high and responsible a position in the Department as that of a Second Assistant District Engineer, and that in fact it was a mistake in the first instance promoting him to that rank, I have accordingly to recommend that he be reduced to the rank of Sub-Engineer, 1st Class, which, though not subjecting him to any pecuniary loss, except in the rate of travelling allowance, the salary being the same as he is now in receipt of,

viz., Rupees 400 per mensem, will I hope be a sufficient warning to Mr. Bush, and convince him of the necessity for his conducting his duties with more energy and activity than he has done for some time past.

15. Mr. Bush will then be a Supernumerary, 1st class Sub-Engineer, and his place in the Engineering branch of the Department as 2nd Assistant District Engineer, will remain unfilled until he has been absorbed as an Upper Subordinate, in order that no additional expense may be sustained by Government.

16. Should, however, this reduction fail to have the desired effect, it will then become my duty to recommend to Government Mr. Bush's removal from the Department.

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No. 350. ORDER THEREON, 28th November 1861, No. 2,194.

1. The Government are unwilling to adopt harsher measures than those recommended by the Chief Engineer; though it seems to them that too much indulgence has already been shown to Mr. Bush. They will not, however, object to give him one more trial, but it must be on the distinct understanding that he will be dismissed entirely from the service, if his conduct does not prove satisfactory hereafter.

2. In accordance with the Chief Engineer's recommendation therefore, Mr. Bush will be degraded from his present position of 2nd Assistant District Engineer to that of a Sub-Engineer of the 1st Class, where it is hoped he will endeavour to atone for the past by a more zealous performance of his duties. As suggested in paragraph 15, the vacancy in the Engineering Department of 2nd Assistant, will not be filled up until Mr. Bush is in course of time absorbed as an Upper Subordinate.

3. Mr. Bush will be required forthwith to dispense with the services of his private writers in the performance of Government work, and warned against a repetition of this breach of rule.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 351. Read the following Proceedings of the Madras Government in the Educational Department, dated 19th November 1861, No. 56.

Read the following letter from A. J. ARBUTHNOT, Esq., Director of Public Instruction, to J. D. SIM, Esq., Secretary to Government, Fort Saint George, dated Coonoor, 26th October 1861, No. 2,084:—

SIR,

1. The Principal of the Civil Engineering College has brought to my notice that several of the European Military Students admitted into the College will be unable to pass the standard laid down for the grade of Assistant Overseer, and that a recent rule to the effect that the Military pay of a soldier employed as a Sub-Overseer shall be merged in his Civil salary, precludes their appointment to the latter grade; the salary attached to it Rupees 40, being "insufficient for a European with a marching appointment to live on in respectability." He accordingly recommends that orders may be issued for the appointment of such men, provided their characters are good, to the situations of Barrack Sergeant and Road Sergeant as vacancies occur, in preference to men who have not attended the College.

2. It appeared to me, when I received this recommendation, that, under the circumstances, of the case, the course suggested by the Principal might, with propriety, be followed in regard to deserving students now in the College who are not likely to qualify as Assistant Overseers, but that it was not desirable, or necessary, that the Civil Engineering College should be made permanently a place of education for Departments for which the instruction imparted in it is not really required, and that if European Students cannot be appointed

Sub-Overseers, the test for admission in this case should be so regulated as to exclude any man who might not reasonably be expected to pass for the grade of Assistant Overseer within a period of two years.

3. The Deputy Chief Engineer in charge of the Central Office of Public Works, to whom I made a reference on the subject, was of opinion that the standard for admission could not be revised, and was doubtful whether a higher entrance test would remove the difficulty. "Some few men," he observed, "would be capable of passing a much "higher entrance examination, but that might be, and probably would be, the result of "superior early education, and they might still be unable to grasp the higher subjects that "form part of the course." He expressed his concurrence in the opinion of the Principal as to the expediency of giving a preference to Military Students of approved character from the Civil Engineering College, for the situations of Barrack Sergeant and Road Sergeant.

4. On full consideration of the subject, I beg leave to support the Principal's recommendation, and to suggest that the attention of the Heads of the Departments in which Barrack Sergeants and Road Sergeants are employed, be directed to the Order of Government noted in the margin.* It is probable that however carefully the standard for admission to the College may be enforced, there will be some Students admitted who will prove unable to pass successfully through the prescribed course of instruction, but who would be well qualified for such situations as those to which the Principal refers. None of course should be selected but men of approved good character and fair natural intelligence.

* Public Works Department, No. 2,492, dated 24th October 1859, paragraph 5, Clause 3.

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Referred to the Military Department and to the Department of Public Works for consideration.

(True Extract.)

(Signed) T. PYCROFT,
*Chief Secretary.*

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No. 352. ORDER THEREON, 28th November 1861, No. 2,195.

Referred to the Chief Engineer for his remarks.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

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No. 353. Read the following Proceedings of the Madras Government in the Marine Department, dated 21st November 1861, No. 383:—

Referring a letter from the Acting Agent P. and O. Steam Navigation Company, requesting to be informed whether there is any objection on the part of Government to sell or sub-let four Godowns situated at Royapooram. (Vide Marine Proceedings, 21st November 1861, Nos. 76 @ 78.)

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No. 354. ORDER THEREON, 28th November 1861, No. 2,196.

Referred to the Chief Engineer for report.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

No. 355. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 4th November 1861, No. 6,833:—

SIR,

1 Letter from District Engineer, Kistna, No. 80, dated 16th August 1861.
12 Abstract Estimates.
9 Plans.
1 Comparative Statement.

1. With the accompanying letter the District Engineer, Kistna, submits estimates amounting to Rupees 12,080 for the minor Channels and masonry works necessary to give full effect to and distribute the water conveyed by the main Channels and two main branches taken off from the Ellore Canal above the Budemair aqueduct, and known as "Ryves' Channels," sanctioned by Government on the 4th October 1860, No. 2,061, and also a Supplemental Estimate of Rupees 9,380 for the completion of the main Channel itself, for which the original estimate is insufficient.

2. The minor works were not included in the original estimate which was intended to provide only for the conveyance of an additional supply of water to the existing Channel of Irrigation, the *Poolairoo,* now insufficiently fed by the present section of the Masulipatam Canal, and the main object sought was the early completion of this work, so as to be in readiness against the present irrigating season and to ensure an adequate supply to the Poolairoo towards its close, when the demand is largest and supply shortest. From the available labor being so small, it was found impossible to complete the Channel against the commencement of the season, but the District Engineer hoped it would be sufficiently advanced in October to allow of the Poolairoo being replenished at the critical time.

3. The minor works now estimated for consist of, for the main Channel :—

| | RS. |
|---|---|
| 1 Under-tunnel, 6 feet vent ... | 2,340 |
| 1 Do. do. ... | 2,060 |
| 3 Masonry inlets at 360 ... | 1,080 |
| *In the branch Channel.* | |
| 4 Masonry inlets at 150 ... | 600 |
| Small Irrigation branch to Singaveram and Temersa ... | 1,570 |
| Do. do. from do. ... | 270 |
| Do. to Dondapad ... | 1,690 |
| Do. do. to Sallapudy and Parur ... | 1,260 |
| 2 Head sluices to Mustapha Khan Koder and Gundicodu... | 900 |
| Sluice to cross Palacodu ... | 310 |
| Total...... | 12,080 |

4. The necessity for an additional grant on account of the main Channel arises from an excess in the actual amount of excavation over that originally contemplated. The course of the Channel was slightly changed for the purpose of avoiding a tank and irrigating Channels in Zamíndári lands, and the risk of future disputes regarding the customary supply of water from such tanks. This deviation increased the length by $1\frac{1}{4}$ miles, and necessitated higher embankments. The rates allowed in the original estimate for earthwork were sufficient, and the excess in the cost of excavation is owing only to the increase of work.

5. The estimate for the masonry* works was calculated at an average rate, but the present District Engineer states that it is insufficient for the lower sluice at the Gudiváda branch Channel, as it is necessary to convey the material some distance by land, and he also proposes a modified plan for that work the estimate of which is Rupees 1,160.

* Head sluice.
Do. to Gudiváda branch.

6. There will also be an increase in the cost of the branch Channel itself of Rupees 957, arising from a greater quantity of work being required than originally provided for.

7. The present District Engineer states that he has gone carefully over the whole of this project, making all the measurement afresh, and that the estimates now submitted include all that is necessary for its completion. The total cost of these Channels, inclusive of the minor works of distribution, will thus be Rupees 64,860. He requests permission to execute these works during the current year, providing the money from the general funds at his disposal by the diversion of the sums allowed for works in excess of what he will be able to expend, or which being inferior in importance will bear postponement. They are as follows :—

| | Amount allotted. | Probable expenditure. | Balance. | Remarks. |
|---|---|---|---|---|
| | RS. | RS. | RS. | |
| Masulipatam* Canal. | 45,000 | 35,000 | 10,000 | The Executive Officer will probably be unable to expend more than 35,000 Rupees within the year. |
| Channel from Duggeralla to Peddaravur. | 5,000 | .... | 5,000 | Not required, the side Channels having been partly formed by the excavation required for the Canal embankments and may be finished by degrees by the earth obtained by the clearance of the Canal, their banks only requiring to be raised as the demand for water increases. |
| Channel from Timmapaudy to Duggeralla. | 2,470 | ...... | 2,470 | Not recommended for prosecution, water not being available. |
| Do. from Duggeralla to Evancy. | 1,160 | ...... | 1,160 | |
| Dam across the Valalur Channel. | 500 | ...... | 500 | Not required this year. |
| Calingulah to Budam tank. | 500 | ...... | 500 | |
| Wall for Dutch grave yard. | 640 | ...... | 640 | Not required, work cancelled by Order of Government, No. 144, dated 11th May 1861. |
| Total...... | 55,270 | 35,000 | 20,270 | |

| | RS. |
|---|---|
| *Entered in the Budget ... ... ... ... ... | 75,185 |
| Deduct amount disallowed by Government,—See C. E., Miscellaneous Circular, No. 8, dated 6th June 1861 ... ... ... | 30,185 |
| Balance...... | 45,000 |

8. The completion of the Channels and their distributing branches being of the first importance in the development of the Kistna system of irrigation, I beg to recommend that Major Anderson's proposals to divert the above mentioned sum to the purpose on the estimates now submitted, amounting to Rupees 21,460, may be sanctioned. The balance of Rupees 1,190 will, if necessary, be made up from other Districts.

9. The remainder of the District Engineer's letter treats of the improvement to be made to the Poolairoo, the main irrigating duct in the eastern Delta of the Kistna, from the point where Ryves' Channels enter it. The proposals made by Major Anderson are judicious, but as they do not form part of the present project, which is confined to simply affording the Poolairoo an additional supply of water for the existing irrigation under it, I do not enter into them further than to observe that the rectification of the slope of the bed of the Poolairoo affects that of Ryves' Channel, and that Major Anderson proposes to remedy this by building a masonry drop, 2′ 6″ high, immediately below the head of the Gudiváda branch, the cost, viz., Rupees 1,760, being met by the reduced amount of excavation required in the reach above it.

10. The improvements to the Poolairoo by raising the level of its surface water will furnish the means of irrigating a great part of the high ground to the south of the Colair lake, and its continuation will ultimately afford a connexion with the Salt Pans at Buntoomilly and with the river Oopootair.

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No. 356. ORDER THEREON, 29th November 1861, No. 2,197.

1. With this letter, the Chief Engineer forwards several estimates to the aggregate amount of Rupees 12,080, for masonry works and minor channels necessary to give effect to the two channels sanctioned in the Order of 4th October 1860, No. 2,061, and known as "Ryves' Channels." A Supplemental Estimate for Rupees 9,380 for completing the channels themselves is also submitted.

2. The object of these channels is to afford the Poolairoo, the main irrigating duct in the eastern Delta of the Kistna, an additional supply of water for the existing irrigation under it; and it was represented, when the project was first submitted, that it would be self-paying, and be the means of relieving distress. In his present letter, the Chief Engineer states that the completion of the project is of the first importance to the development of the Kistna system of irrigation; and relying on the assurance of the District Engineer that the estimates now submitted include all that is necessary for effecting that object, the Government, under the circumstances stated, accede to Colonel Horsley's recommendation, and grant permission for the execution of the works during the current official year.

3. The estimated outlay Rupees (21,460) twenty-one thousand four hundred and sixty, may be obtained as proposed in paragraphs 7 and 8 of Colonel Horsley's letter. The Government observe, however, that the Order of 11th May 1861, No. 144 (Ecclesiastical Department), quoted in the Statement in the margin of paragraph 7, does not cancel, as is there stated, the estimate of Rupees 640 for "wall for Dutch grave-yard" in the compound of Mr. Majoribanks' house at Masulipatam; but refers to another estimate for Rupees 230, submitted by Colonel Horsley on 13th March 1861 (No. 10,888), for an iron railing round the grave of a Dutch Admiral in the Fort Square. The first mentioned work may, however, be deferred to next year, and the funds appropriated to that now in question.

4. The sanction now granted, it is observed, raises the estimated cost of the project to Rupees 64,860.*

| | RS. |
|---|---|
| * Sanctioned 4th October 1860 | 43,400 |
| Now sanctioned | 21,460 |
| Total.... | 64,860 |

5. Major Anderson's proposals for the improvement of the Poolairoo seem deserving of early attention.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 357. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to His Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 16th October 1861, No. 44:—

SIR,

1. The report of the operations of the Public Works Department for the Official year 1859-60, transmitted with your letter, No. 59, dated 25th July last, has been considered by me in Council.

2. A similar report for 1858-59 was forwarded by your Government in February of last year, whereas that under review has been delayed until July. It is very desirable that reports of this nature should come to hand as early as possible after the close of the year to which they relate.

3. In my Despatch of 15th June 1860, No. 39, your serious attention was called to the very large proportion which the establishment charges bore to the sum expended on Public Works, viz., 36 per cent. I observe that in the year 1859-60 the per centage was about $34\frac{1}{2}$, and, even if the whole of the sanctioned sum had been expended, would have been about 31 per cent. I still consider that it is essentially necessary that some means should be devised which may bring the charges for establishments and the sums expended by those establishments to some more proper proportion.

4. The next point to which I would allude is that, although Rupees 53,56,707 was allotted for expenditure, the actual amount spent was only Rupees 48,91,059, leaving upwards of $4\frac{1}{2}$ lacs unexpended. This is much to be regretted, both on account of the numerous works of importance waiting for funds to carry them out, and also on account of the very fact above mentioned of the establishment being large enough to have superintended a much greater expenditure. I trust, however, that the suspension of the restrictive orders and the notice you have taken of it in your Government order will prevent its recurrence.

5. Among the works executed during the year by the Civil Architect at the Presidency, I observe "an additional story with colonnade verandah to the Government House," at a cost of 23,657 Rupees.

6. No information is afforded of the necessity of any addition to this building, which, it is believed, was sufficiently commodious for the chief residence of the Governor. But, even allowing that this was not the case, I cannot approve of a large expenditure of this nature having been incurred at a time of unusual financial pressure, when funds for many works urgently required for the improvement of irrigation and communication were on that account withheld.

7. A very large amount is again noticeable under the head of Repairs, in the district of Tanjore, but it is stated to be owing to the serious damage caused by the storms of the previous year.

8. With regard to the navigable canals, the traffic has greatly decreased upon those of the Godavery District, owing, however, mainly to the unusually low state of that river during March and April, and the partial failure of the crops. Of the Eastern Coast Canal traffic, the same unfavourable report appears, in consequence of the season having been a bad one for the manufacture of salt. It is satisfactory, on the other hand, to notice that the passenger traffic had increased upon the three canals, and that the number and size of the boats using the Paumben passage had also greatly increased.

9. I observe that the division of the various districts into executive ranges, with fixed office establishments, has been carried out, and I have no doubt that the arrangement will be attended with success.

10. It is to be regretted that, in more than one district, complaints continue to be made of the want of co-operation between the Revenue officers and those of the Public Works Department.

11. The progress made in the Ellore portion of the High Level Canal is very satisfactory, and the opening of the Samulcottah and Cocanada Canal has, I am glad to see, answered the expectations entertained of it. The Toonee Channel will, I understand, be completed when funds are available.

12. I observe, with much satisfaction, the attention paid by the Executive Department, North Canara, to the improvement of the roads leading from the cotton districts to the sea coast.

13. In the 11th paragraph of my Despatch of 15th June 1860, No. 39, I expressed a wish to be furnished with a further report upon the capabilities of Ransome's (Hall's) brick-making machine, but I have not yet received any communication on the subject.

No. 358. ORDER THEREON, 29th November 1861, No. 2,198.

1. Ordered to be communicated to the Chief Engineer for his information. Colonel Horsley's particular attention will be directed to paragraphs 2, 4 and 10. He will be requested to submit his annual reports on the Public Works Department as soon as possible, and care will be taken in the Government Office to print and transmit it to the Secretary of State without delay.

2. The subject of paragraph 3 is under the consideration of Government.

3. The attention of the Board of Revenue also will be called to paragraph 10.

4. Paragraph 13 will be referred to the Chief Engineer for very early report. He will be furnished with copy of paragraph 11 of the Despatch from the Secretary of State, dated 15th June 1860, No. 39.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 359. Read the following Proceedings of the Madras Government in the Judicial Department, dated 21st November 1861, No. 1,424.

Read the following letter from W. GREY, Esq., Secretary to the Government of India, (Home Department, Judicial), to J. D. SIM, Esq., Secretary to the Government of Fort Saint George, dated Fort William, 31st October 1861, No. 2,156 :—

SIR,

1. I am directed to acknowledge the receipt of your letters Nos. 1,106 and 1,180, dated respectively the 3rd and 20th ultimo.

2. In the former letter the Government of Madras has raised a question as to the expediency of selecting any place in the Neilgherries as a site for a Jail for European and American Convicts, and in the latter the establishment of a General Prison in any part of the Madras Presidency for the reception of such Convicts from all parts of India is apparently deprecated.

3. The Governor General in Council having fully considered the arguments urged in these letters and having regard to the probability that the great majority of Civil European Convicts will continue to be tried and sentenced in Calcutta, is of opinion that instead of establishing a General Prison for all India, it will be preferable that each Presidency should provide for the reception of its own Convicts, and a communication on the subject will accordingly be made to the Governments of Bengal and Bombay.

4. I am desired to state, however, that it will be necessary as a temporary arrangement, until such time as a suitable Jail can be constructed in Bengal, to remove some of the men now in confinement at Calcutta to the Jail which has been built at Ootacamund ; and I am directed, therefore, to request that as early an intimation as possible may be given of the time when that Jail will be ready for the reception of Prisoners. It is probable that accommodation will be required for from 25 to 30 men.

5. It is presumed that, to meet the present requirements of the Madras Presidency, it will not be necessary to incur any further expense in the construction of a Jail for the reception of European Convicts.

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1. Communicated to the Inspector General of Jails, and to the Public Works Department.

2. Mr. Rohde is requested to state when the Jail at Ootacamund will be ready for the reception of the Convicts.

(True Extract.)

(Signed) T. PYCROFT,
*Chief Secretary.*

No. 360. ORDER THEREON, 29th November 1861, No. 2,199.

Communicated to the Chief Engineer.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 361. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 9th November 1861, No. 6,999:—

SIR,

1 Irrigation Register.
Ex. Min. Cons. No. 1,181, dated 18th June 1857.
Do. „ 170, „ 29th January 1858.
Do. „ 2,494, „ 23rd November 1858.
Do. „ 1,613, „ 1st July 1859.
Do. „ 1,466, „ 5th August 1861.

1. Agreeably to the orders of Government marginally noted, I have the honor to forward for inspection, the "Irrigation Register" of the Coimbatore District, for the period embracing Fasli 1266 to 1269 (1856 to 1859).

2. It has been prepared in accordance with the Order of Government, No. 324, dated 16th February 1861, the Register being closed with the year preceding the alterations in the size of Táluqs introduced in 1860.

3. I recommend that the Register be bound and adopted for general use.

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No. 362. ORDER THEREON, 29th November 1861, No. 2,200.

The Irrigation Register of the Coimbatore District will be returned to the Chief Engineer with the approval of Government. It will be bound, and adopted for general use as recommended; but the columns showing the extent of dependent lands and the assessment thereon will be first headed Cawnies or Rupees or whatever the entries may represent, as this is more needed in Coimbatore than any where else.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 363. Read the following letter from J. J. FRANKLIN, Esq., Chairman Pier Committee, to J. D. SIM, Esq., Secretary to Government, dated Madras, 21st November 1861, No. 24:—

SIR,

1. I have the honor, on behalf of the Pier Committee, to inform you that they have arranged to open the Pier for passengers and mails on the 1st December, and that in accordance with the instructions contained in the last paragraph of the Order of Government of the 10th ultimo, No. 1,879, they have consulted with Colonel Boileau on the rate of toll to be temporarily imposed, and that they now recommend a levy of (2) two Annas on each person using the pier to proceed to or from a ship in the roads.

2. The Committee desire to submit to Government the necessity there will be for a temporary establishment during the partial use of the pier by the public. A steady European Sailor will be required to be constantly in attendance at the ladders and to work the tub when required. No establishment is proposed for aiding the Boatswains in lowering and hoisting the ladders and tub, as it is intended the boats crews should perform this duty for the present. Three Dafádárs and twelve Peons are likewise necessary for the protection of property

| | | | | RS. | A. |
|---|---|---|---|---|---|
| 2 | Boatswains at Rupees | 35 | .. .. .. .. | 70 | 0 |
| 3 | Dafádárs | „ | 10½ ... .. .. .. | 31 | 8 |
| 12 | Peons | „ | 7 .. .. .. .. | 84 | 0 |
| 4 | Money-takers | „ | 15 .. .. .. .. | 60 | 0 |
| | | | Total...... | 245 | 8 |

on the pier, and to keep order. The Commissioner of Police has been applied to for some peons for this purpose, but he states that already his force is over-worked, and that not a single man can be spared for such duties.

3. Finally four Money-takers must be employed to levy the toll, which, during the time he work on the Pier is being carried on, must be demanded at the ladders for those landing, and at a toll-gate at the inner end for those embarking. The Committee propose that a certain number of tickets of two different colors be given to the money-takers: that each person wishing to embark shall purchase a ticket of a particular color at the toll gate, which he shall deliver to the money-taker at the ladders before going into his boat; and that similarly a passenger landing on the pier shall pay at the ladder, receive a ticket of another color, to be presented at the gate before being allowed to pass out. The Committee are aware that this method does not afford an infallible check to peculation, but it is the best that at present occurs to them. On the completion of the pier they recommend that a tell-tale turnstile be established. The money collected will be paid into the Sea Customs' cash chest as each money-taker is relieved.

4. I am now to solicit that Government will be pleased to sanction the entertainment of the temporary establishment proposed from the 1st of December next, with the exception of the money-takers, who will not be required before the 1st January.

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No. 364. ORDER THEREON, 29th November 1861, No. 2,201.

1. The Governor in Council considers the establishment proposed to be somewhat in excess of present requirements.

2. The two Boatswains will be needed, and are sanctioned.

3. One Dafâdâr and six Peons are ample to preserve order and protect property on the Pier.

4. The proposed rate of toll and the arrangements for levying it are sanctioned experimentally from the 1st January next.

| | RS. | A. |
|---|---|---|
| 2 Boatswains at Rupees 35 | 70 | 0 |
| 1 Dafâdár | 10 | 8 |
| 6 Peons at „ 7 | 42 | 0 |
| For December 1861 | 122 | 8 |
| 4 Toll-takers at Rupees 15 | 60 | 0 |
| From 1st January 1862 | 182 | 8 |

5. The establishment sanctioned under these orders will cost Rupees 122½ for December and Rupees 182½ thereafter monthly.

6. The Committee are requested to forward a monthly abstract of the receipts and charges. For the first month a Treasury order will be passed for the pay of the establishment.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 365. Proceedings of the Madras Government, dated 29th November 1861, No. 2,202:—

Resolved that the Collectors of Salem and Trichinopoly be called upon to report, without any avoidable delay, on the state of the road between their respective chief towns.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 366. Proceedings of the Madras Government, dated 29th November 1861, No. 2,203:—

The Governor in Council deems it expedient, in anticipation of the pending re-organization of the Department Public Works, that the Chief Engineer should be appointed Secretary to Government in that Department. It will accordingly be intimated to Colonel Horsley that this arrangement will come into operation on the 1st January next. The intervening time will

suffice for the necessary Office arrangements, on which Colonel Horsley will report without delay. As soon as these are matured, notification of Colonel Horsley's appointment will be made in the Gazette.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 367. Proceedings of the Madras Government, dated 29th November 1861, No. 2,204 :—

Resolved that the Chief Engineer be called upon to furnish immediately a Plan of Fort Saint George, showing the casemates, &c., together with a report as to the condition of the scarpe, or more generally of the masonry of the works, as the Government observe that it has given way in several places.

(Signed) C. G. MASTER,
*Deputy Secretary to Government.*

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No. 368. Read the following Despatch from the Right Honorable Sir C. WOOD, Bart., Secretary of State for India (Public Works), to his Excellency the Honorable the Governor in Council, Fort Saint George, dated India Office, London, 16th October 1861, No. 46 :—

SIR,

1. The reports by Captains Stoddard and Haig, transmitted with your letter, No. 64, dated 13th August last, upon the transport of stores by the Godavery during the past season, have been read by me with much interest.

2. I agree with you, however, in your opinion that, looking to the measures that have been sanctioned for the improvement of the Godavery, it is not advisable at present to incur further expenses in promoting the transport of Government stores upon that river, in preference to the old route from Masulipatam ; but that the Commissary General should be instructed to make such arrangements as he may from time to time find the cheapest and most advantageous to the State.

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No. 369. ORDER THEREON, 30th November 1861, No. 2,205.

Ordered to be communicated to the Chief Engineer, the Commissary General, and the Military Department, with reference to the Proceedings of Government, 21st June 1861, No. 1,148.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 370. Read the following letter from Lieutenant-Colonel W. H. HORSLEY, Chief Engineer, to J. D. SIM, Esq., Secretary to Government, dated Chepauk, 2nd November 1861, No. 6,773 :—

SIR,

1. I have the honor to forward a plan and estimate amounting to Rupees 2,410, for constructing two waste weirs and under-sluices on the banks of the Roya Calwah in the Hospet Táluq of the Bellary District.

1 Letter from the District Engineer Bellary, No. 130, dated 11th July 1861.
1 Copy of letter from the Collector of Bellary, No. 181, dated 4th July 1861.
1 Plan.
1 Estimate.
1 Specification report.

2. These works are intended to guard against breaches in the banks of the above Channel led from the river Tungabaddra. One of them is proposed to be constructed opposite the village of Nagahulli, and the other at that part of the Channel where the Luckkee Hollah discharges itself into the Channel. The Collector entirely approves of the works and expresses the opinion that they are essentially necessary for the safety of the banks referred to.

3. Under these circumstances I beg to recommend that the plan and estimate, which have undergone the usual examination in this Office, may be sanctioned for immediate execution, from the general funds at the disposal of the District Engineer Bellary, for the current official year.

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No. 371. ORDER THEREON, 30th November 1861, No. 2,206.

1. The estimate of Rupees (2,410,) two thousand four hundred and ten, submitted with this letter, is sanctioned for execution as proposed.

2. The Chief Engineer states that the estimate is for constructing two waste weirs and funder-sluices; but the Government observe that it provides also for a third waste weir of 100 feet in length.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 372. Read the following Telegram from Lieutenant-Colonel W. F. MARRIOTT, Secretary to the Government of Bombay, to J. D. SIM, Esq., Secretary to the Government of Fort Saint George, dated Mahablisnawar, 29th November 1861:—

Commodore Wellesley has been requested to give the desired instructions to Captain Fraser, about Buoys and Moorings at Tuddri and Beitkál.

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No. 373. ORDER THEREON, 30th November 1861, No. 2,207.

Communicated to the Chief Engineer, with reference to his Endorsement dated 18th November 1861, No. 7,308.

(Signed) J. D. SIM,
*Secretary to Government.*

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No. 374. Read the following Proceedings of the Madras Government in the Military Department, dated 27th November 1861, No. 4,299:—

Approving of the estimate for certain additions and alterations to the new Commissariat Godown at Saint Thomas' Mount. } (Vide Military Proceedings, 27th November 1861, Nos. 655-656.)

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No. 375. ORDER THEREON, 30th November 1861, No. 2,208.

Ordered to be communicated to the Chief Engineer for information and guidance, with reference to his letter of 13th November 1861, No. 7,145.

(Signed) J. D. SIM,
*Secretary to Government.*

The following papers are ordered to be recorded, 30th November 1861, No. 2,209 :—

Proceedings of the Board of Revenue, dated 22nd October 1861, No. 5,807.

Forwarding for report an Official Memorandum from Government, requesting information regarding the steps taken to give effect to the suggestions of Sir. C. Trevelyan, regarding the management of irrigation works in Trichinopoly.

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Endorsement of the Chief Engineer, dated 24th October 1861, No. 6,335.

Submits for information a letter from the District Engineer of Tinnevelly, stating that the back Verandah of the Salt Pan Kacheri at Tuticorin, can be made available for the shelter of the manufacturers and merchants.

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Endorsement of the Chief Engineer, dated 30th October 1861, No. 6,639.

Submits a letter received from the District Engineer North Canara, requesting to be supplied with Nasmyth's Pile Driving Machine, and states that the Chief Engineer is making arrangements for sending it to Western Coast with other articles by the first opportunity.

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Proceedings of the Madras Government in the Educational Department, dated 1st November 1861, No. 46.

Requiring the Principal of the Civil Engineering College, to apply to the Executive Engineer, Bangalore, for a supply of Bamboo mats similar to those used in almost every house at that station.

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From Major J. K. Spence, Judicial Commissioner, in charge Commissioner's Office, dated 2nd November 1861, No. 19.

Informing that a Telegram has been despatched, stating that Lieutenant Puckle declined the appointment offered to him.

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Endorsement of the Chief Engineer, dated 4th November 1861, No. 6,814.

Submits letter from the District Engineer Kistna, intimating that the building at Chabrole, which is to be occupied for the second Circle, is to be used as an Office only, and not to be used as a place of residence by the Assistant Supervisor.

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Proceedings of the Madras Government in the Public Department, dated 4th November 1861, No. 1,484.

Sanctioning an estimate for constructing a Revolving Equatorial Dome with a covered passage over the terraced roof of the Government Astronomer's residence at Madras.

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Endorsement of the Chief Engineer, dated 5th November 1861, No. 6,844.

Submitting letter from the District Engineer Nellore, reporting a heavy fall of rain at Ongole, and the damages caused thereby.

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Proceedings of the Madras Government in the Marine Department, dated 7th November 1861, No. 352.

Sanctioning the expenses incurred in connection with the Buoy in the Port of Cocanada.

Proceedings of the Madras Government in the Public Department, dated 7th November 1861, No. 1,498.

Approving the arrangements proposed by Government Astronomer, with respect to certain expenses to be incurred for repairing some instruments.

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Endorsement of the Chief Engineer, dated 8th November 1861, No. 6,955.

Submits a letter from the District Engineer Nellore, reporting that certain tanks, &c., have been breached in the Northern Range.

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Proceedings of the Madras Government in the Ecclesiastical Department, dated 8th November 1861, No. 300.

Sanctioning the estimate for erecting a black granite slab with the inscription cut over the Cenotaph of the late Sir Thomas Munro, at Gooty, Bellary District.

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From the Chief Engineer, dated 11th November 1861, No. 7,037.

Reporting with reference to the Proceedings of Government, No. 2,025, dated 4th November 1861, that the probable cost of Lithographing 100 copies of the Irrigation Map of the Madras Territories, will be Rupees 2,195, including all expenses; that he will again report to Government of the actual cost when the Lithographing is completed; and that as regards the arrangements, referred to in the 2nd paragraph of the Order, for the transmission of the 12 copies of the map at the close of every official year to the Right Honorable Secretary of State for India, he purposes forwarding them as usual through the Secretary to Government, Public Works Department.

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Proceedings of the Madras Government in the Judical Department, dated 11th November 1861, No. 1,365.

Stating that the request of the District Engineer Madura, to have the building called Tumkum, reserved for him, will be taken into consideration in the event of the abolition of the Subordinate Judgeship of the said District, shall hereafter be decided on.

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Endorsement of the Chief Engineer, dated 15th November 1861, No. 7,226.

Submits a letter received from the District Engineer, Presidency, regarding fifty more Stone Cutters being required at the Alguada Reef Light House, and states that he has requested the District Engineer to procure the number of men required at an early date.

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Endorsement of the Chief Engineer, dated 15th November 1861, No. 7,247.

Submits Telegraph message from Colonel Yule, received through the District Engineer Godavery, regarding the arrangements of Steamers for His Excellency the Viceroy.

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Proceedings of the Madras Government in the Educational Department, dated 18th November 1861, No. 54.

Directing Chief Engineer to make provision in the Public Works Budget for 1862-63, for so much of the building required for the amalgamation of the Military Orphan Asylum at Madras with the Lawrence Asylum at Ootacamund, as can be constructed in that year.

Proceedings of the Madras Government in the Public Department, dated 20th November 1861, No. 1,547.

Directing the removal of a small building situated at the junction of Ummon Pagoda and Seven Wells Street, Black Town, as well as the sale of its materials.

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Proceedings of the Madras Government in the Military Department, dated 21st November 1861, No. 4,227.

Requiring the Heads of each Department to submit with the Indent to the Controller of Military Finance, an estimate in duplicate of the value of all Stores demanded from Home.